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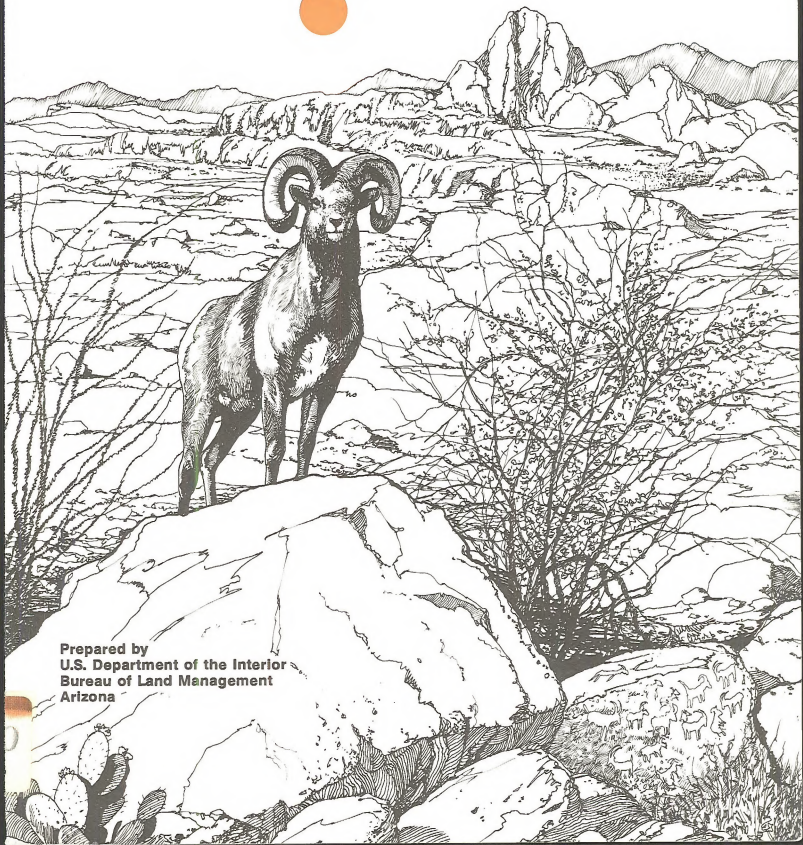
ARIZONA MOHAVE

Final Wilderness Environmental Impact Statement



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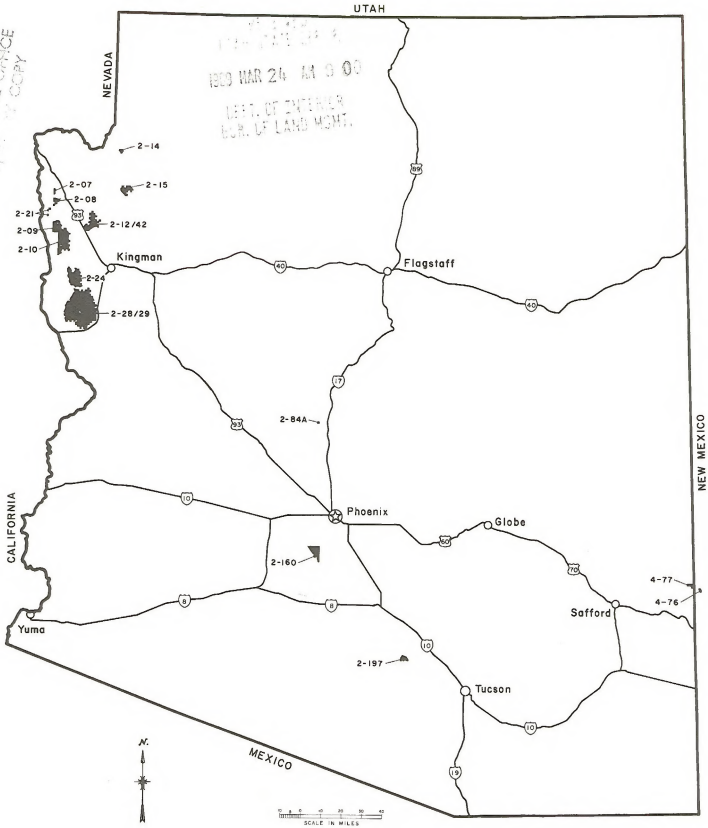

ARIZONA MOHAVE WILDERNESS

PHOENIX DISTRICT WSA's

2-07	Van Deeman
2-08	Mockingbird
2-09	Black Mountains N.
2-10	Burns Spring
2-12/42	Mount Tipton
2-14	Grapevine Wash
2-15	Grand Wash Cliffs
2-21	Mount Davis
2-24	Mount Nutt
2-28/29	Warm Springs
2-84A	South Bradshaws East
2-160	Sierra Estrella
2-197	Ragged Top

SAFFORD DISTRICT WSA's

4-76	Apache Box
4-77	Hoverrocker

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
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February 1989

This document is the Final Environmental Impact Statement (FEIS) for wilderness in the Bureau of Land Management (BLM) Phoenix and Safford Districts in Arizona. Fifteen wilderness study areas with 276,464 acres have been analyzed for suitability for wilderness designation.

Our FEIS satisfies the requirement of the Federal Land Policy and Management Act. The Act directs the Secretary of the Interior to study public lands with wilderness characteristics and make recommendations as to which land would be suitable as wilderness. Since 1978 the BLM has been studying the public lands, reporting to the public and asking for comments from land users. This document gives my recommendations on the 15 wilderness study areas. The recommendations are not decisions, as only Congress can decide which lands are suitable as wilderness, thereby placing the area into the National Wilderness Preservation System.

This FEIS will soon go to the Director of the BLM in Washington, then to the Secretary of the Interior, along with mineral information about the study areas recommended for wilderness designation. The minerals data have been gathered and analyzed by the Bureau of Mines and the U.S. Geological Survey. The Secretary will review the mineral resources reports and make recommendations to the President of the United States by October 1991. The President will, in turn, forward recommendations to Congress by October 1993 where the final decisions about wilderness designation may be acted upon. The Congress is under no schedule to take any action on the recommendations.

On behalf of the BLM and my staff, I appreciate all the time and effort contributed by so many people like you in commenting about the wilderness study areas. Bureau specialists and managers have read and listened to these comments and have, in some instances, modified previous recommendations. Once again, thank you for your participation.

Sincerely,

D. Dean Bibles
State Director

ERRATA

SUBSURFACE MINERAL OWNERSHIP CHANGES FROM THE

SANTA FE PACIFIC RAILROAD COMPANY AND FEDERAL GOVERNMENT LAND EXCHANGE

On October 29, 1988, the federal government and the Santa Fe Pacific Railroad Company exchanged titles to 282,007 acres of underground mineral estate. The trade gave the Department of the Interior title to 141,073 acres of Santa Fe minerals beneath Bureau of Land Management-administered (BLM) public lands, Grand Canyon National Park and Havasu National Wildlife Refuge.

The mineral estate acquired by the federal government includes 109,185 acres of Santa Fe minerals beneath 12 BLM-administered wilderness study areas in western Mohave and northern La Paz counties. Three of the 12 WSAs are addressed in this Final Arizona Mohave Wilderness Environmental Impact Statement -- and are shown below with the acquired mineral rights acreages.

Mount Tipton WSA	11,959 acres
Mount Nutt WSA	3,381 acres
Warm Springs	13,521 acres

Subsurface split estate mineral ownership changes are:

WSA	Previous Acreage	Current Acreage after the Exchange
Mount Tipton	10,500	2,050
Mount Nutt	4,161	400
Warm Springs	16,214	2,682

The Mount Tipton WSA alternative maps (Maps 2-4 and 2-5), Mount Nutt alternative maps (Maps 2-8, 2-9 and 2-10) and Warm Springs Alternative maps (Maps 2-11, 2-12 and 2-13) have been revised to show up-to-date accurate mineral land ownership status beneath the WSAs.

Land Use and *Mineral Development* narratives (addressing mineral estate beneath these three WSAs) in Chapters 2, 3 and 4 have not been revised and, therefore, reflect mineral ownership before the land exchange. Because the date of the exchange was so close to publication date all the narratives could not be rewritten. Revising the narrative would have substantially delayed publication, thereby voiding our printing contract.

The exchange will result in fewer impacts on the environment. However, the impact analysis in Chapter 4 remains essentially accurate regarding environmental analyses developed in Chapter 2.

The remaining WSAs discussed in this EIS were not affected by the Santa Fe-federal government mineral exchange.

FINAL
ENVIRONMENTAL IMPACT STATEMENT

PROPOSED WILDERNESS PROGRAM

for the

ARIZONA MOHAVE WILDERNESS AREAS

Greenlee, Maricopa, Mohave, Pima, Pinal
and Yavapai Counties, Arizona and Grant County, New Mexico

Prepared by

THE DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT
PHOENIX AND SAFFORD DISTRICTS

STATE DIRECTOR
ARIZONA STATE OFFICE

For further information contact Bill Carter, EIS team leader, Phoenix District Office, Bureau of Land Management, 2015 West Deer Valley Road, Phoenix, Arizona 85027 or call (602) 863-4464 or FTS 764-0501.

SUMMARY

SUMMARY

Purpose and Need

The Bureau of Land Management (BLM) is under Congressional mandate to review the public lands for roadless areas of 5,000 acres or more that have wilderness character and, by October 1991, to recommend to the President the suitability of such areas for preservation as wilderness. This final environmental impact statement (FEIS) assesses the environmental consequences of managing as wilderness all or parts of 15 wilderness study areas (WSAs) in the Phoenix and Safford Districts. The WSAs are in Greenlee, Maricopa, Mohave, Pima and Yavapai counties, Arizona, and Grant County, New Mexico.

The wilderness review includes the following steps:

- an inventory phase in which roadless areas were evaluated for size, naturalness and outstanding opportunities for solitude and primitive recreation,
- a study phase in which WSAs suitable for wilderness designation were determined and
- a reporting phase in which suitability recommendations are forwarded to Congress through the Secretary of the Interior and the President.

Scoping (Issue Identification)

To help identify and summarize significant issues related to wilderness management, BLM held a series of public meetings to identify public concerns. BLM also evaluated public comments received during the wilderness inventory phase and planning period and BLM specialists applied their professional judgment in analyzing issues. The issue identification process brought out the significant wilderness-related issues addressed in the draft EIS. The draft EIS was distributed to the public in September 1987 and comments were received through January 1988.

Alternatives

The alternatives assessed in this final EIS include: 1) the *No Wilderness/No Action* alternatives for each WSA, 2) the *All Wilderness* alternatives for each WSA, 3) *Partial Wilderness* alternatives for five WSAs and 4) *Enhanced Wilderness* alternatives for two WSAs.

The *Proposed Action* was developed after BLM's review of the public scoping comments, inventory data and management concerns and management actions anticipated for each WSA. The *Proposed Action* recommends as suitable for wilderness designation all or portions of six WSAs totalling 202,210 acres. The remaining 74,254 acres in WSAs would be recommended to be returned to other multiple uses.

Environmental Consequences

BLM only addressed impacts to those resources that would be significantly impacted by either wilderness designation or nondesignation. The following resources were identified as being significantly impacted.

Wilderness Values

Wilderness designation would ensure the continued preservation and enhancement of wilderness values because designation would preclude some mining and other types of activities. Nondesignation would result in the impairment of some wilderness values because varying levels of development would be allowed in those areas not designated.

Mineral Development

Wilderness designation would cause adverse impacts to mineral exploration and development by imposing regulations on development of mineral resources. All public lands in WSAs not designated wilderness would remain open for mineral leasing and appropriation under the general mining laws and regulations.

Recreation Use

Wilderness designation would eliminate motorized recreation activity, affect the availability of off-road vehicle (ORV) recreation, shift ORV users to adjacent public lands and increase nonmotorized recreation. Overall, wilderness designation would increase annual recreation visitor use in some WSAs and decrease use in other WSAs, with a decrease in total because most existing recreation use is motorized.

Cultural Resources

Wilderness designation would generally benefit cultural resources in the WSAs by limiting new developments. Such activity improves access to cultural sites and increases visitation, often resulting in artifact collection and other vandalism.

Wildlife Habitat and Wildlife-Sensitive Species

Wilderness designation would generally protect wildlife habitat (crucial bighorn sheep habitat and important desert tortoise habitat) from long-term cumulative habitat losses that would result from the development anticipated in WSAs not designated wilderness.

Land Uses

Wilderness designation would prevent granting of some rights-of-way in wilderness areas.

Vegetative Sales

The sale of of Mohave yucca would be prevented in harvest areas designated wilderness.

Mitigating Measures

BLM's *Wilderness Management Policy* provides direction to mitigate the impacts of wilderness designation on the following activities: 1) access to state or private inholdings, 2) valid mining claims, 3) the existing private rights that accompany such claims and 4) the maintenance of existing livestock and wildlife facilities. Many of these non-conforming uses would remain in a designated wilderness area. Impacts from specific management actions dealing with these uses will be assessed in wilderness management plans developed for each designated wilderness area.

Specific laws and regulations require BLM to protect threatened and endangered plants and animals along with cultural and visual resources. BLM is also required to manage the public lands to prevent unnecessary resource degradation. In the event of nondesignation, BLM has a variety of management tools available to preserve the resource values of the area.

Crucial desert bighorn sheep habitat is found in all WSAs in the Black Mountains and within the Ragged Top and Sierra Estrella WSAs in southern Arizona.

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Chapter 1

PURPOSE AND NEED

CHAPTER 1

PURPOSE AND NEED

Introduction

The *Arizona Mohave Wilderness Final Environmental Impact Statement* (EIS) examines the environmental consequences (impacts) to the resources and uses of 15 wilderness study areas (WSAs) (Table 1-1) in the Phoenix and Safford districts of the Bureau of Land Management (BLM) under two or more wilderness management alternatives. The document also describes in detail the resources present in each of the 15 WSAs.

TABLE 1-1
Wilderness Study Areas
Bureau of Land Management
Phoenix and Safford Districts, Arizona

WSAs	Unit Numbers	Acreage
	PHOENIX DISTRICT	
Van Deeman *	02-07	1,510
Mockingbird *	02-08	5,815
Black Mountains North	02-09	19,900
Burns Spring	02-10	30,600
Mount Tipton	02-12/42	34,060
Grapevine Wash *	02-14	2,200
Grand Wash Cliffs	02-15	12,176
Mount Davis *	02-21	2,560
Mount Nutt	02-24	29,190
Warm Springs	02-28/29	114,800
South Bradshaws East *	02-84A	640
Sierra Estrella	02-160	14,830
Ragged Top *	02-197	4,460
	SAFFORD DISTRICT	
Apache Box *	04-76	932
Hoverrocker *	04-77	2,791

* These WSAs are being studied under Section 202 of the *Federal Land Policy and Management Act of 1976.*

Source: BLM District Files.

The *Arizona Mohave Wilderness EIS* contains the preliminary recommendations as to whether all or portions of each of the 15 WSAs are suitable or nonsuitable for inclusion into the National Wilderness Preservation System (NWPS). Only Congress can designate an area as wilderness. Congress has further retained the right to release certain areas covered by Section 603 of the *Federal Land Policy and Management Act (FLPMA) of 1976,* whereas the areas covered by Section 202 of FLPMA that are not recommended for wilderness designation may be returned to other forms of management after the final EIS is filed and released to the public.

Purpose and Need for Action

This wilderness EIS was prepared to analyze the effects of designation or nondesignation as wilderness of 276,464 acres of public land in 15 WSAs. In compliance with the *National Environmental Policy Act* (NEPA), this EIS fully analyzes the environmental effects of implementing reasonable wilderness management alternatives for each WSA.

The EIS responds to Sections 603(a) and 202 of FLPMA of 1976. These sections of FLPMA made wilderness preservation one of BLM's multiple use mandates and made the preservation of wilderness values one of the resources the BLM considers in multiple use planning. FLPMA directed BLM to inventory, study and then report to Congress—through the Secretary of the Interior and the President—those public lands suitable for inclusion in the National Wilderness Preservation System (NWPS). FLPMA requires the Secretary of the Interior to report wilderness recommendations to the President by October 21, 1991 (FLPMA, Section 603(a)). The President must report final recommendations to Congress within two years (October 21, 1993). Congress has no time limit for acting upon the President's recommendations.

Seven of these WSAs are being evaluated under the requirements of Section 603(a) of FLPMA. Section 202 of FLPMA also provided BLM with an opportunity to evaluate for wilderness quality other areas which were not mandated under Section 603. BLM under Section 202 of FLPMA has chosen to study another eight areas as listed on Table 1-1. Thus, 15 WSAs are included in this document.

The *Proposed Action* represents BLM's preliminary recommendations for these 15 WSAs.

Scoping (Issue Identification)

Scoping served to identify the significant environmental issues to be analyzed in this EIS and eliminated insignificant issues from detailed study. The significant environmental issues have been incorporated into a range of alternatives for each WSA and the impacts of implementing such alternatives are analyzed in this EIS. A description of all phases of the scoping process is in Chapter 5 (Consultation and Coordination) of this FEIS.

Environmental Issue Identification

The BLM's EIS team used the scoping process to identify and address public and management concerns associated with the WSAs considered for wilderness designation. The team then defined which concerns were significant and would be analyzed in the EIS. They are:

Effects on Wilderness Values. The wilderness values of naturalness, solitude, primitive recreation and various special values could benefit from wilderness designation. The same values may be adversely affected by uses and actions that would occur should the WSAs not be designated wilderness. The impacts of wilderness designation and nondesignation on wilderness values are an issue for analysis in all 15 WSAs addressed in this EIS.

Effects on the Level of Mineral Development. Wilderness designation would affect the development of mineral resources by eliminating designated lands from mineral entry and prohibiting mineral leasing and disposal of mineral materials. However, there are private mineral estate holdings in six WSAs. In the land transactions BLM acquired the surface rights, but the subsurface owner "reserved the rights to the oil, gas, coal and other minerals, together with the right to prospect for, mine and remove the same." Development of existing mining claims within designated wilderness areas could be affected by wilderness management restrictions although mineral rights valid upon wilderness designation could be exercised. The effect of wilderness designation on the development of undiscovered and discovered mineral resources is an issue in 14 WSAs.

Effects on the Level of Recreation Use. Wilderness designation or nondesignation would affect the quality and availability of recreation opportunities in each WSA. Wilderness designation would eliminate the use of recreational motorized vehicles in designated areas and would shift to adjacent lands the use now in the areas. The effect of wilderness designation on motorized and nonmotorized recreation use is an issue in all 15 WSAs. No recreation facilities would be planned for the no wilderness recommendations.

Effects on Cultural Resources. Certain cultural sites in the WSAs are considered eligible for listing on the National Register of Historic Places. Wilderness designation would close the area to motorized vehicle use, thus protecting the sites from vehicle damage. The impact of wilderness designation on the eligible cultural resource sites is an issue in all 15 WSAs.

Effects on the Amount of Crucial and Important Wildlife and Riparian Habitats. Wilderness designation would protect riparian habitat and important desert tortoise and crucial bighorn sheep habitats by reducing surface- disturbing activities and eliminating ORV use in those habitats. The effect of wilderness designation on riparian, desert tortoise and crucial bighorn habitats is an issue only in the 13 WSAs that contain these habitats.

Effects on Vegetative Sales. Wilderness designation would prevent the sale of Mohave yucca in the designated areas which would shift the sale areas to other sites. The effect of wilderness designation on Mohave yucca sales is an issue in three WSAs.

Effects on Protected Plants. There have been no formal botanical inventories in the WSAs, but in 11 of the WSAs suitable habitat has been identified. The effect of wilderness designation on protected plants is an issue in 11 WSAs.

Issues Considered But Not Analyzed

The following issues were identified in scoping but were not selected for detailed analysis in the EIS. The reasons for setting each of the issues aside are discussed under the heading for each issue.

Effects on Livestock Operations. Concerns were raised that livestock operators would be required to modify their operations within designated wilderness areas in a manner that would have significant adverse economic impact on their business. This issue was considered but dropped because the BLM's *Wilderness Management Policy* provides for possible fluctuations of livestock numbers and changes in the kind or class of livestock or seasons of use, if warranted through monitoring data and if these adjustments did not impair wilderness characteristics. However, designation is expected to cause closer regulation of range improvement construction, maintenance or practices in WSAs designated as wilderness. Although the management practices of livestock operators in designated wilderness would be closely regulated, the operators would still be allowed to maintain range improvements in a practical and reasonable manner as necessary to support existing livestock operations. Therefore, the effect of wilderness designation on livestock operations is not an issue in this EIS.

Effects on Wild Horse and Burro Capture. Concerns were raised regarding the effect of wilderness designation on the wild horse and burro capture program in five WSAs. The methods used for burro roundup and capture (usually during July and August when recreation use is lowest) are the most practical and economic available for the areas under study. No change in the capture methods would be implemented under wilderness management. The capture methods are detailed for the WSAs in Chapter 3 (see Black Mountains North, Burns Spring, Mount Tipton, Mount Nutt and Warm Springs). Therefore, the effect of wilderness designation on wild horse and burro capture is not an issue in this EIS.

Effects on Air Quality Classification. Concerns were raised regarding the effect of wilderness designation on existing air quality classifications. Since the wilderness management policy states that the BLM will manage all wilderness areas to comply with the air quality classification for that specific area, wilderness designation or nondesignation would not recommend reclassification of air quality standards for designated wilderness from the existing Class II to the more restrictive Class I. Therefore, air quality is not an issue in this EIS.

Effects on Water Quality. Water quality is not expected to be impacted by wilderness designation or nondesignation because most actions that affect water quality, such as livestock grazing, would not be affected by wilderness designation. Other activities such as mineral development would have little or no effect on water quality due to the low rainfall and little runoff. Federal and state laws affecting water quality management require mandatory compliance regardless of designation or nondesignation. Therefore. water quality is not an issue in this EIS.

Impacts on Wildlife. An issue dealing with nonsensitive wildlife populations and habitats was considered but not included in this EIS. Based on development projections in these areas, little or no change in wildlife populations (other than bighorn sheep and desert tortoise) or habitat is anticipated, with wilderness designation or nondesignation, in any of the 15 WSAs addressed in this EIS.

Effects on Soil Erosion. Consultation with the Soil Conservation Service has indicated that none of the WSAs has soil erosion problems. While wilderness designation would restrict surface-disturbing activities, anticipated surface-disturbing activities within the 14 WSAs would not accelerate soil erosion. Therefore, the effect of wilderness designation on soil erosion is not an issue in this EIS.

Social Elements. Social attitudes and values are not expected to be impacted by the designation or nondesignation of wilderness; therefore, social elements are not an issue in this EIS.

Military Overflights. There will be no specific prohibition of overflights above designated wilderness areas by aircraft on essential military training missions, in accordance with BLM policy. Where low overflights could become a problem, wilderness management plans provide for liaison between BLM and the military. Therefore, military overflights are not considered to be an issue in this EIS.

Effects on Economic Conditions. Wilderness designation would preclude a number of mining operations in all 15 WSAs addressed in this EIS. The economic impact of precluding these mining operations may affect local communities to some degree but is not expected to significantly impact the diverse economy of the economic study area. Designation would result in a small loss of oil and gas lease revenues collected by BLM. However, this loss is not significant because the loss amounts to less than one percent of BLM's total oil and gas lease revenues. No loss is expected from oil and gas production revenues because none of the 15 WSAs contains proven reserves. Therefore, the economic impact resulting from wilderness designation or nondesignation is not an issue in any of the 15 WSAs addressed in this EIS.

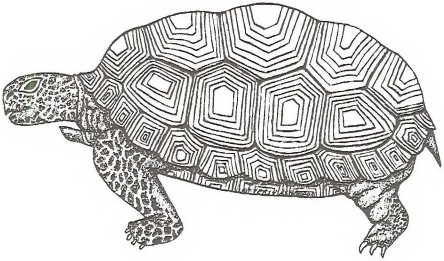
Selection of Alternatives

The *All Wilderness* alternative represents the maximum possible WSA acreage that could be recommended as suitable for wilderness designation. Partial wilderness alternatives make suitable or nonsuitable recommendations ranging between the *All Wilderness* and *No Wilderness/No Action* alternatives. The *Proposed Action* recommends *All Wilderness* for one WSA, *No Wilderness/No Action* for nine WSAs and *Partial Wilderness* for five WSAs.

Table 2-1 shows WSA acreage recommended suitable for wilderness designation under each alternative.

Alternatives Considered but Not Recommended for Detailed Study

The alternatives selected for analysis in the EIS were the only ones considered during the selection of alternatives.



Chapter 2

ALTERNATIVES

CHAPTER 2

ALTERNATIVES INCLUDING THE PROPOSED ACTION

Introduction

This chapter describes in detail the alternatives selected for analysis in this final environmental impact statement (EIS). To provide the public and the decisionmaker with a convenient tool for comparing impacts, defining issues and reaching conclusions, the chapter ends with a summary for each WSA comparing the effects on resources that would result from implementing each alternative.

Description of the Alternatives

This section provides a description of the alternatives for each WSA being considered in this EIS (Table 2-1). First is a general description of the alternatives, followed by the management actions or uses expected to occur within the next 25 years.

Since the pattern of future management actions and uses in each WSA cannot be predicted with certainty, assumptions are made to allow impacts to be analyzed. These assumptions are the basis of the management actions and uses developed for each WSA and alternative. The management actions are not management proposals, but are believed to represent probable patterns of activities which may occur as a result of wilderness designation or the areas being released from further wilderness study (Table 2-1). Actions and uses for each WSA and alternative are described for minerals, land uses, rangeland management, recreation use and wildlife management.

The following are assumptions used by resource specialists in identifying the management actions and uses:

MINERALS ACTIONS

- Upon designation, the public mineral lands would be withdrawn from all forms of appropriation under the mining laws and mineral leasing laws, subject to valid existing rights.
- Valid existing rights would allow mining activities in a designated wilderness to continue.
- Private (nonfederal) minerals would be open to exploration and development in designated wilderness. Six WSAs contain private minerals (see Table 2-2).
- All mineral development projections are based on past production activities, current exploration activities and on geological inference.
- Prior to approving mining plans of operation the District Manager shall cause an examination of the unpatented claim(s) by a BLM minerals examiner to verify whether or not a valid claim exists. The minerals examination and subsequent minerals report must confirm that as of the date of wilderness designation minerals had been found and evidence is of such a character that a person of ordinary prudence would be justified in the further expenditure of his labor and means, with a reasonable prospect of success in developing a valuable mine. Any disapproval or denial of a plan of operation by the authorized officer is subject to appeal by the operator under the provisions of 43 CFR 3809.4.

Upon designation, permits would not be issued for the removal of minerals commonly known as saleable minerals under the Materials Act of July 31, 1947,as amended and supplemented.

All the mineral exploration and development programs are are described for each alternative. Mining Cost Service, Western Mine Engineering, 1987, describes mine types and sizes as follows:

— The typical underground mine described in this EIS would use the shrinkage mining method with railroad ore cars moved by a battery-powered locomotive.

Surface development to support underground mining would include -
- mine plant and buildings;
- equipment maintenance and retrograde yard;
- engineering and management facilities;
- mill plant and tailings thickener;
- .625 mile of tailings-conveyance system and
- a tailings disposal area.

The typical small underground mining operation would -
- process up to 100 ore tons per day;
- employ up to 12 people;
- have up to four building structures and
- disturb approximately five surface acres (unless otherwise identified) plus the access.

The typical moderate (medium) underground mining operation would -
- process up to 500 to 600 ore tons per day;
- employ up to 30 people;
- have up to six building structures and
- disturb 50 surface acres plus the access.

The typical large underground mining operation would -
- process more than 600 ton of ore per day;
- employ more than 30 people;
- have more than six building structures and
- disturb 100 acres plus the access.

— Surface mine disturbances will cover larger areas by the nature of the mining technique. The typical surface mine described in this EIS would employ the open-pit mining method, using drills, transferral loaders and trucks.

Surface-disturbing activity related to open-pit mining includes-
- mine plant including engineering and management facilities;
- equipment maintenance and retrograde yard;
- haulage routes;
- mill plant including tailings thickener;

TABLE 2-1
WSA ALTERNATIVES ANALYZED
Bureau of Land Management, Arizona

WSA	ALTERNATIVE	Acres Suitable	Acres NonSuitable
Van Deeman	Proposed Action (No Wilderness)	0	1,510
(AZ-020-07)	All Wilderness	1,510	0
Mockingbird	Proposed Action (No Wilderness)	0	5,815
(AZ-020-08)	All Wilderness	5,815	0
Black Mountains North	Proposed Action (Partial Wilderness)	18,400	1,500
(AZ-020-09)	All Wilderness	19,900	0
	No Wilderness	0	19,900
Burns Spring	Proposed Action (Partial Wilderness)[1]	23,000	7,600
(AZ-020-10)	All Wilderness	30,600	0
	No Wilderness	0	30,600
Mount Tipton	Proposed Action (Partial Wilderness)	28,170	5,890
(AZ-020-12/42)	All Wilderness	34,060	0
	No Wilderness	0	34,060
Grapevine Wash	Proposed Action (No Wilderness)	0	2,200
(AZ-020-14)	All Wilderness	2,200	0
Grand Wash Cliffs	Proposed Action (No Wilderness)	0	12,176
(AZ-020-15)	All Wilderness	12,176	0
Mount Davis	Proposed Action (No Wilderness)	0	2,560
(AZ-020-21)	All Wilderness	2,560	0
Mount Nutt	Proposed Action (Partial Wilderness)[1]	27,210	1,980
(AZ-020-24)	All Wilderness	29,190	0
	Enhanced Wilderness	27,860	1,980
	No Wilderness	0	29,190
Warm Springs	Proposed Action (Partial Wilderness)	90,600	24,200
(AZ-020-28/29)	All Wilderness	114,800	0
	Enhanced Wilderness	91,220	24,200
	No Wilderness	0	114,800
South Bradshaws East	Proposed Action (No Wilderness)	0	640
(AZ-020-84A)	All Wilderness	640	0
Sierra Estrella	Proposed Action (All Wilderness)	14,830	0
(AZ-020-160)	No Wilderness	0	14,830
Ragged Top	Proposed Action (No Wilderness)	0	4,460
(AZ-020-197)	All Wilderness	4,460	0
Apache Box	Proposed Action (No Wilderness)	0	932
(AZ-040-76)	All Wilderness	932	0
Hoverrocker	Proposed Action (No Wilderness)	0	2,791
(AZ-040-77)	All Wilderness	2,791	0

[1] This figure represents original Section 603 (WSA) acreage minus the nonsuitable acreage, plus all inholdings totally within the original WSA boundaries that have been acquired (640 acres in Burns Spring; 457 acres in Mount Nutt).

Source: Phoenix District and Safford District Files.

TABLE 2-2

MINERAL ESTATE OWNERSHIP
Bureau of Land Management, Arizona

		MINERAL ESTATE OWNERSHIP			
		Designated Acres		Nondesignated Acres	
WSA	ALTERNATIVE	Federal	Private	Federal	Private
Black Mountains North (AZ-020-09)	Proposed Action (Partial Wilderness)	9,460	8,940	730	770
	All Wilderness	10,190	9,710	0	0
	No Wilderness	0	0	10,190	9,710
Burns Spring (AZ-020-10)	Proposed Action (Partial Wilderness)	16,280	6,720	6,000	1,600
	All Wilderness	22,280	8,320	0	0
	No Wilderness	0	0	22,280	8,320
Mount Tipton (AZ-020-12/42)	Proposed Action (Partial Wilderness)	19,250	8,920	4,310	1,580
	All Wilderness	23,560	10,500	0	0
	No Wilderness	0	0	23,560	10,500
Grand Wash Cliffs (AZ-020-15)	Proposed Action (No Wilderness)	0	0	7,696	4,480
	All Wilderness	7,696	4,480	0	0
Mount Nutt (AZ-020-24)	Proposed Action (Partial Wilderness)	23,049	4,161	1,980	0
	All Wilderness	25,029	4,161	0	0
	Enhanced Wilderness	23,699	4,161	1,980	0
	No Wilderness	0	0	25,029	4,161
Warm Springs (AZ-020-28/29)	Proposed Action (Partial Wilderness)	76,686	13,934	21,900	2,280
	All Wilderness	98,586	16,214	0	0
	Enhanced Wilderness	77,306	13,934	21,900	2,280
	No Wilderness	0	0	98,586	16,214

Source: Phoenix District Files.

- .625 mile of tailings conveyance system and
- a tailings disposal area.

The typical small surface mining operation would -
- process up to 500 ore tons per day;
- employ up to 12 people;
- have up to six building structures and
- cause up to 50 acres of surface disturbance plus the access needed.

The typical moderate surface mining operation would -
- process up to 1,000 ore tons per day;
- employ up to 40 people;
- have up to seven building structures and
- disturb up to 300 surface acres (unless otherwise identified) plus the access needed.

The typical large surface mining operation would -
- process more than 1,000 ore tons per day;
- employ more than 40 people;
- have in excess of 10 buildings and
- disturb 600 surface acres (unless otherwise identified) plus the access needed.

The above figures will be used in the analyses unless otherwise noted.

Salable minerals are found in 12 of the WSAs but none have been sold and there is no local demand for the minerals.

No oil or gas development is anticipated in any of the WSAs addressed in this EIS.

Lands Management Actions

Alternatives describing rights-of-way are based on probable occurrences.

Rangeland Management Actions

Development and maintenance of range improvements in the WSAs would be allowed if the improvements meet the criteria identified in the *Wilderness Management Policy*.

Increases in livestock use would be allowed when multiple-use monitoring data clearly indicate that additional forage is available and can be grazed without impairment of wilderness values or damage to other multiple-use resources or values. Fluctuations of livestock numbers, changes in kind or class of livestock or in seasons of use would be possible on all allotments (WO IM No. 87-142; 87-100 and AZ IM No. 87-55).

Vehicle use would be subject to the restrictions of the "minimum tool" policy. The occasional use of motorized equipment would be permitted for construction and maintenance of certain improvements. However, the customary use of motorized vehicles for transportation to check on livestock and water facilities, haul salt, conduct monitoring studies and supervise grazing use would be prohibited or severely restricted (AZ-87-288 and BLM Manual 8560).

Recreation Use Actions

Visitor use in the WSAs is projected 25 years into the future. All estimates are based on Arizona's projected population increases over that period and on other changes (i.e., expected mining developments which could affect the level of recreation. It is assumed that recreation use would increase proportionately with the state's population increase. No recreational facilities exist or are presently planned in any of the WSAs addressed in this EIS.

Cultural Resources Management

Cultural resource inventories and mitigation are undertaken on public lands before authorizing surface-disturbing activities such as construction within utility corridors, livestock and wildlife projects or mining operations. Mitigating measures would be proposed to preserve scientific information and other cultural values in an area of possible surface disturbance.

Wildlife Management Actions

Endangered and threatened wildlife and plant species, both federal- and state-listed, and their habitats would be adequately considered and subject to reasonable research and management actions as deemed necessary by state and federal agencies.

Development and maintenance of wildlife habitat improvements in any of the WSAs would be allowed if the improvements meet the criteria identified in the *Wilderness Management Policy.*

Motorized vehicle use, including helicopters, would be subject to the "minimum tool" policy. The customary use of motorized vehicles, including helicopters, would be restricted for assessing wildlife habitat improvement projects for design, monitoring and maintenance, as well as conducting inventories and monitoring of threatened and endangered species.

Helicopter flyover of the wildlife projects would be used on the average of one day every year to monitor the developments. A helicopter would land near the site on an average of once every two years to determine maintenance needs. Equipment to repair the project would be taken in by helicopter or vehicle on the average of once every two years.

Annually a big game survey is conducted within the WSA by helicopter or fixed wing aircraft by the Arizona Game and Fish Department.

Following are descriptions of expected actions and uses under each alternative for each WSA.

VAN DEEMAN WSA
(AZ-02-07)

Proposed Action/No Wilderness Alternative (Map 2-1)

The *Proposed Action/No Wilderness* alternative for the Van Deeman WSA would return 1,510 acres to other multiple uses.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

It is anticipated that seven exploration programs in the area would produce four medium open-pit mines (disturbing 1,200 acres) and one large open-pit mine (disturbing 600 acres) inside and adjacent to the area. The new mines in sections 18, 19, 29 and 30 would have a staff of about 140 people. Five miles of road construction would disturb approximately seven acres.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA. Development of mines would preclude most recreational use in time.

WILDLIFE MANAGEMENT ACTIONS

Maintenance of the Van Deeman tank is planned to provide water for wildlife. The tank will be maintained until the open pit mining discourages wildlife from using the area. Currently a 4-WD vehicle, helicopter and foot travel are used to access this project (see Table 2-3).

Vehicle access to the existing Van Deeman Tank starts on a vehicle way at Van Deeman Mine (T. 27 N., R. 21 W., section 29) and continues northwest almost up to the tank in section 30. A total of ¾ mile of vehicle access is in the WSA.

A desert tortoise survey and subsequent monitoring (foot travel) of tortoise populations within the WSA are anticipated.

No other resource actions or uses are anticipated.

All Wilderness Alternative (Map 2-1)

The All Wilderness alternative for the Van Deeman WSA would designate 1,510 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

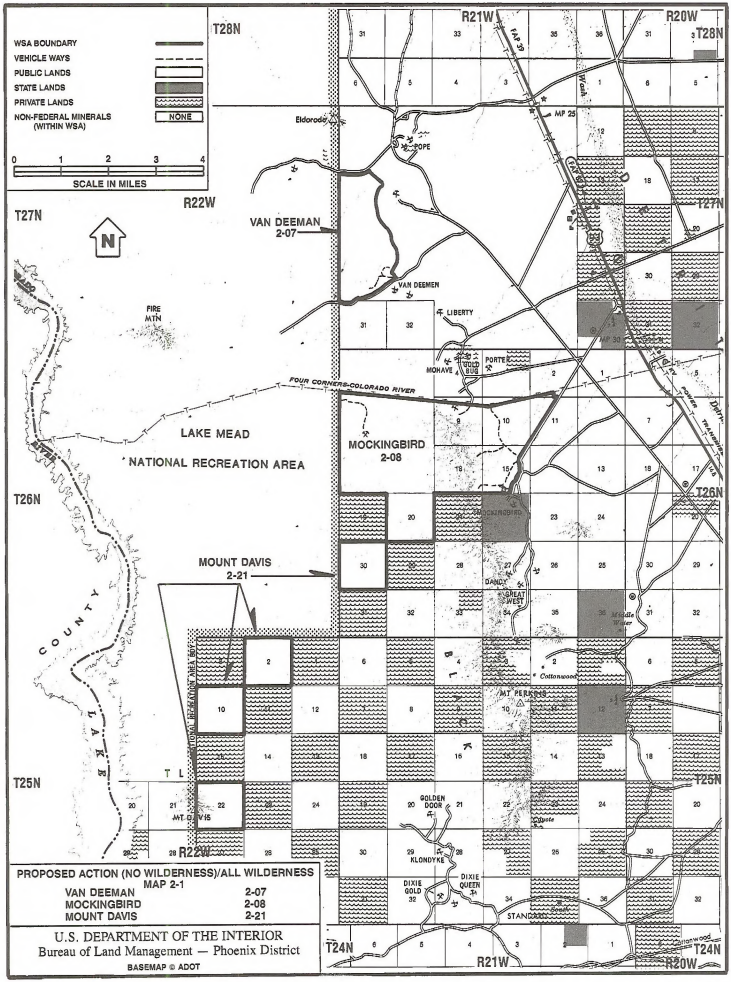

WSA BOUNDARY
VEHICLE WAYS
PUBLIC LANDS
STATE LANDS
PRIVATE LANDS
NON-FEDERAL MINERALS (WITHIN WSA)
NONE
0 1 2 3 4
SCALE IN MILES
N
T28N
R21W
R20W
T27N
R22W
T26N
T25N
T24N
VAN DEEMAN 2-07
MOCKINGBIRD 2-08
MOUNT DAVIS 2-21
Eldorado
POPE
MP 25
VAN DEEMEN
LIBERTY
PORTER
MOHAVE
FIRE MTN
FOUR CORNERS-COLORADO RIVER
LAKE MEAD
NATIONAL RECREATION AREA
COUNTY
LAKE
MT DAVIS
DANDY
GREAT WEST
Cottonwood
MT PERKINS
GOLDEN DOOR
KLONDYKE
DIXIE GOLD
DIXIE QUEEN
STANDARD
Middle Water
Colorado River
Colorado River Trail
Colorado River Indian Reservation
Colorado River Indian Reservation Well Field
PROPOSED ACTION (NO WILDERNESS)/ALL WILDERNESS
MAP 2-1
VAN DEEMAN 2-07
MOCKINGBIRD 2-08
MOUNT DAVIS 2-21
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT

TABLE 2-3
EXISTING WILDLIFE DEVELOPMENTS AND LOCATIONS
Bureau of Land Management, Arizona

WSA	Project Name	Project Location	Project Type	Access Needs: 4-WD Vehicle	Access Needs: Heli-copter	Access Needs: Foot
Van Deeman 2-07	Van Deeman Tank	T.27N., R.21W., Sec. 30 NE	Pothole	X	X	X
Mockingbird 2-08	No Existing Projects					
Black Mtns. North 2-09	Lower Lost Cabin Spring	T.24N., R.21W., Sec. 27	Spring		X	X
	Master Spring	T.24N., R.21W., Sec. 21	Spring		X	X
	Pass Tank No. 3	T.24N., R.21W., Sec. 22	Pothole		X	X
	Pass Tank No. 2 & 4	T.24N., R.21W., Sec. 27	Pothole		X	X
Burns Spring 2-10	Chalk Spring	T.23N., R.21W., Sec. 36	Spring	X	X	X
	Calles Spring	T.23N., R.21W., Sec. 27	Spring	X	X	
	Hidden Spring	T.22N., R.21W., Sec. 1	Spring		X	X
	Lost Cabin No. 1	T.23N., R.20W., Sec. 18 SE	Catchment	X	X	
Mount Tipton 2-12/42	No Existing Projects					
Grapevine Wash 2-14	No Existing Projects					
Grand Wash Cliffs 2-15	Music Mountains Catchment No. 8	T.27N., R.15W., Sec. 8 NESW	Catchment	X	X	X
Mount Davis 2-21	Mount Davis Catchment	T.25N., R.22W., Sec. 22 NWNW	Catchment	X	X	
Mount Nutt 2-24	Battleship Spring	T.20N., R.20W., Sec. 34 SESE	Spring		X	X
	Upper Twin Spring	T.20N., R.19W., Sec. 19 SWNE	Spring	X	X	X
	Trough Spring	T.20N., R.19W., Sec. 6 SWSE	Spring	X	X	X
	WL Spring	T.20N., R.20W., Sec. 13 SESW	Spring		Abandoned	
	Ram Spring	T.21N., R.19W., Sec. 31	Spring	X	X	X
	Slurry Tank	T.21N., R.20W., Sec. 34 SWNE	Pothole	X	X	X
	Grapevine Tank	T.20N., R.20W., Sec. 26	Pothole		Abandoned	
	Raptor Tank	T.19N., R.19W., Sec. 4 SWSE	Pothole		Abandoned	
	Hidden Tank	T.19N., R.19W., Sec. 5 NWSW	Pothole	X	X	
Warm Spring 2-28/29	Sheep Spring	T.18N., R.19W., Sec. 31 NESW	Spring	X	X	X
	McHeffy Spring	T.18N., R.20W., Sec. 27 SWSE	Spring	X	X	
	Columbine Spring	T.17N., R.19W., Sec. 6 NE	Spring	X	X	X
	Metate Spring	T.17N., R.19W., Sec. 6 NENW	Spring	X	X	X
	Cross Seep	T.17N., R.20W., Sec. 2 SWSW	Spring		X	X
	Antelope Spring	T.18N., R.19W., Sec. 9 NWNE	Spring	X	X	X
	Tipperary Tank	T.18N., R.19W., Sec. 19 NENW	Pothole		X	X
	Drill Hole Tank	T.17N., R.19W., Sec. 14 SW	Pothole		X	X
	Black Mesa Tank	T.17N., R.18W., Sec. 16	Pothole		X	X
S. Bradshaws, East 2-84A	No Existing Projects					
Sierra Estrella 2-160	Butterfield Tank	T.2S., R.1E., Sec. 26 NESE	Pothole	X	X	X
	Montezuma Tank	T.3S., R.1E., Sec. 1 SESE	Pothole	X	X	X
Ragged Top 2-197	Ragged Top Tank	T.1IS. R.8E., Sec. 25 NENW	Pothole	X		X
Apache Box 4-76	No Existing Projects					
Hoverrocker 4-77	No Existing Projects					

Source: Phoenix and Safford District Files

MINERALS ACTIONS

One medium and one large open-pit mine would be developed requiring three miles of road construction (inside the WSA in sections 19 and 30). The three miles of new road construction would disturb five acres. The two mines within the WSA would disturb about 900 acres and would employ approximately 65 miners and operators.

RECREATION USE ACTIONS

Wilderness designation would close 1,510 acres to motorized recreation use displacing 20 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA. Development of mines would preclude most recreational use in time.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *All Wilderness* are the same as those planned under *No Wilderness* with the exception that 4-WD vehicle access would occur only during project maintenance that required hauling of heavy materials.

No other resource actions or uses are anticipated.

MOCKINGBIRD WSA
(AZ-020-08)

Proposed Action/No Wilderness Alternative (Map 2-1)

The *Proposed Action/No Wilderness* alternative for the Mockingbird WSA would return 5,815 acres to other multiple uses.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Five expected exploration programs would produce one large open-pit mine in section 15 and one medium sized open-pit mine in section 7. The total disturbance (910 acres) would involve seven miles of road (10 acres), 600 acres in the large open-pit and 300 acres in the medium sized mine. The mines would have about 70 employees.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. An Allotment Management Plan (AMP) has been developed for Unit A of the Big Ranch Allotment. One range improvement including a well, a 2,000-gallon steel storage tank and .9 miles of pipeline exist within the WSA. The AMP provides for continued maintenance of the existing project on the WSA periphery. Although access is provided outside the WSA boundary, mechanical equipment is required for annual maintenance within the WSA.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The development of one additional water development (Fire Mountain Catchment) is anticipated (Table 2-4). Once this project is developed, access by helicopter and foot would be needed.

A desert tortoise survey and subsequent monitoring (both on foot) of tortoise populations within the WSA are expected.

No other resource actions or uses are anticipated.

All Wilderness Alternative (Map 2-1)

The *All Wilderness* alternative for the Mockingbird WSA would designate 5,815 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Seven exploration projects, on valid existing claims, are expected, resulting in three medium sized open-pit mines and two small underground mines, with four miles of road disturbing six acres. The three medium sized open-pit mines would disturb about 300 acres each and the two small underground mines about five acres each (total disturbance of 916 acres) and would employ 90 miners and operators. The medium mines would be in sections 9, 15 and 18 and the small mines in sections 16 and 20.

RANGELAND MANAGEMENT ACTIONS

Livestock and rangeland actions would remain the same as under *Proposed Action/No Wilderness* alternative.

RECREATION USE ACTIONS

Wilderness designation would close 5,815 acres to motorized recreation use displacing 60 VDY of motorized use.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *All Wilderness* are the same as those planned under *No Wilderness.*

No other resource actions or uses are anticipated.

TABLE 2-4
PROPOSED WILDLIFE WATER DEVELOPMENT
Bureau of Land Management, Arizona

WSA	Project Name	Project Location	Project Type	Access Needs: 4-WD Vehicle	Access Needs: Heli-copter	Access Needs: Foot
Van Deeman 2-07	No Planned Projects					
Mockingbird 2-08	Fire Mountain Catchment	T.26N., R.21W., Sec. 7 SW	Catchment		X	X
Black Mtns. North 2-09	Crystal Water Development No. 1	(To Be Determined)	Unknown		X	X
	Crystal Water Development No. 2	(To Be Determined)	Unknown		X	X
Burns Spring 2-10	Crystal Water Development No. 3	(To Be Determined)	Unknown		X	X
	Crystal Water Development No. 4	(To Be Determined)	Unknown		X	X
Mount Tipton 2-12/42	Crystal Water Development No. 10	(To Be Determined)	Unknown	X	X	X
	Crystal Water Development No. 11	To Be Determined)	Unknown	X	X	X
	Mount Tipton Catchment	T.25N., R.18W., Sec. 28 NESE	Catchment		X	X
	Upper Indian Spring	T.25N., R.18W., Sec. 16 NENW	Spring	X	X	X
Grapevine Wash 2-14	No Planned Projects					
Grand Wash Cliffs 2-15	Slickrock Catchment	T.27N., R.16W., Sec. 13 NWNW	Catchment	X	X	X
Mount Davis 2-21	Crystal Water Development No. 5	(To Be Determined)	Unknown		X	X
Mount Nutt 2-24	Crystal Water Development No. 6	(To Be Determined)	Unknown		X	X
	Crystal Water Development No. 7	(To Be Determined)	Unknown		X	X
	Cottonwood Tanks	T.20N., R.20W., Sec. 14 SWSE	Pothole	X	X	X
	Cave Spring	T.20N., R.19W., Sec. 5 NWNW	Spring	X	X	X
Warm Spring 2-28/29	Crystal Water Development No. 8	(To Be Determined)	Unknown			
	Crystal Water Development No. 9	(To Be Determined)	Unknown			
	Alkali Seep	T.19N., R.19W., Sec. 34 NWSW	Spring		X	X
	Spring	T.18N., R.19W., Sec. 4 SWNE	Spring	X	X	X
	Cool Spring	T.19N., R.19W., Sec. 20	Spring	X	X	X
South Bradshaws East 2-84A	No Planned Projects					
Sierra Estrella 2-160	No Planned Projects					
Ragged Top 2-197	No Planned Projects					
Apache Box 4-76	No Planned Projects					
Hoverrocker 4-77	No Planned Projects					

Source: Phoenix and Safford District Files

BLACK MOUNTAINS NORTH WSA
(AZ-020-09)

Proposed Action/Partial Wilderness Alternative (Map 2-2)

The *Proposed Action/Partial Wilderness* for the Black Mountains North WSA would designate 18,400 acres as wilderness and return 1,500 acres to other multiple uses. This alternative differs from the *All Wilderness* alternative in that boundary adjustments would: 1) allow for anticipated expansion of the Portland Mine, 2) exclude an area of high mineral potential including an anticipated open-pit mine in the southern portion of the WSA and 3) allow a vehicle way in Lost Cabin Wash to remain open, providing access to Lake Mohave.

The following uses and actions are anticipated for the designated area.

MINERALS ACTIONS

There would be three small mines (one underground and two open-pit). The two small open-pit mines would be in T. 24 N., R. 21 W., sections 10 and 36 and the underground mine in section 4. The mines would disturb 105 acres and employ 36 people. No new mining access required.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Unit B of the Fort MacEwen allotment has a total of eight miles of boundary fence within the WSA. Maintenance access would be horseback once every five years.

RECREATION USE ACTIONS

Wilderness designation would close 18,400 acres to motorized recreation use displacing 50 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Maintenance of two existing spring developments and two existing pothole developments would be continued (Table 2-3) with annual access by helicopter and foot travel.

The development of two additional waters in this unit is projected (Table 2-4). The field assessments have not been conducted and therefore exact locations are unknown. Maintenance schedules would be the same as those discussed under existing projects. Estimated surface disturbance is less than one-quarter acre for both.

The Lost Cabin spring area, T. 24 N., R. 21 W., section 27, would be used as a future bighorn sheep capture site; the animals would be transplanted to other sites outside of the WSA. Animals may be captured every year for two to three years in a row within an eight-year period.

A desert tortoise survey and subsequent monitoring of tortoise populations within the WSA are anticipated. Survey and monitoring would be on foot.

The following uses and actions are anticipated in 1,500 acres returned to other multiple use management.

MINERALS ACTIONS

The Portland Mine, a large open-pit mine in T. 23 N., R. 21 W., sections 14 and 15, would expand into this area, disturbing 250 acres. A medium-sized open-pit mine is anticipated in T. 23 N., R. 21 W., section 12, disturbing 300 acres. No new mining access is required.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other management actions or uses are anticipated.

All Wilderness Alternative (Map 2-3)

The *All Wilderness* alternative for the Black Mountains North WSA would designate 19,900 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

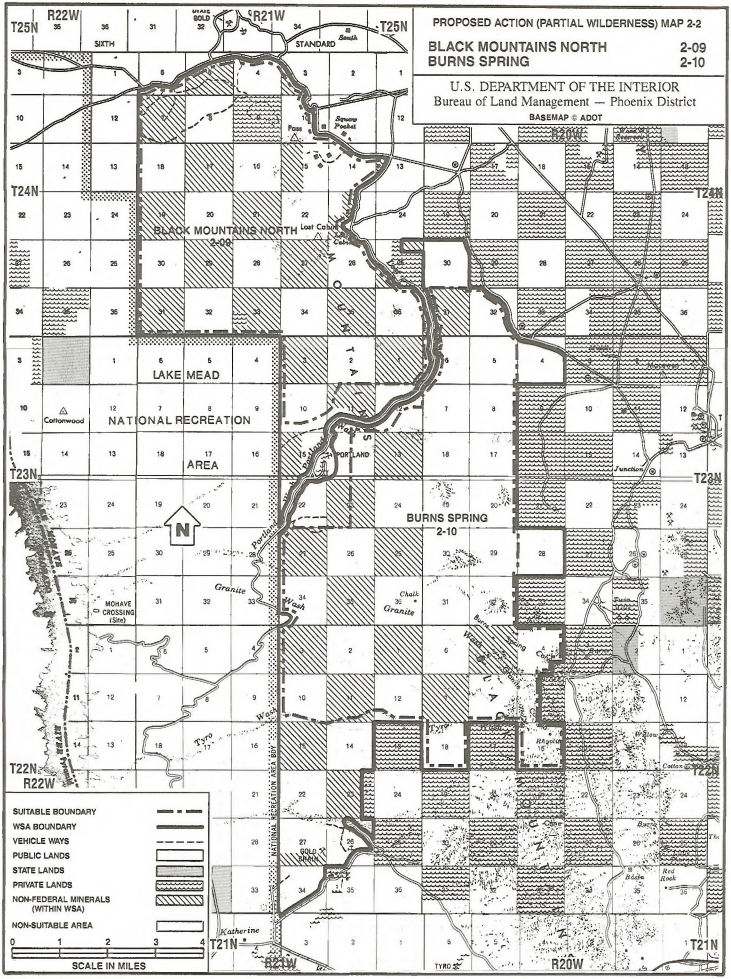
Projections for the Black Mountain North WSA would be one large open-pit mine (T. 23 N., R. 21 W., sections 14 and 15) that would expand into the designated area, causing 250 acres disturbance, one medium sized open-pit mine (T. 23 N., R. 21 W., section 11) using the larger mine's facilities and three small mines—one underground and two open-pit. The two small open-pit mines would be in T. 24 N., R. 21 W., sections 10 and 36, and the underground mine in section 4. The mines would disturb 655 acres and would employ 76 people. No new mining access required.

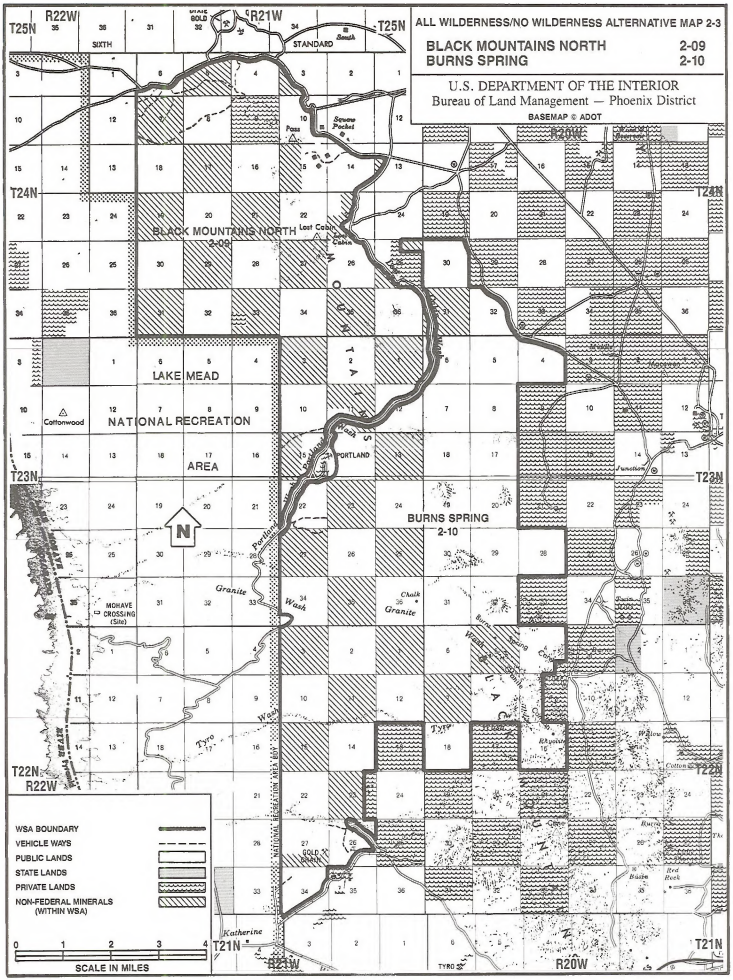
RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Livestock and rangeland actions would remain the same as under the *Proposed Action/Partial Wilderness* alternative. However, the limited amount of existing vehicle way will no longer be used for access to maintain existing fenceline.

RECREATION USE ACTIONS

Wilderness designation would close 19,900 acres to motorized recreation use displacing 200 VDY of motorized use.


PROPOSED ACTION (PARTIAL WILDERNESS) MAP 2-2
BLACK MOUNTAINS NORTH 2-09
BURNS SPRING 2-10
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT
R22W
R21W
T25N
T24N
T23N
T22N
T21N
R20W
SIXTH
STANDARD
BLACK MOUNTAINS NORTH 2-09
LAKE MEAD
NATIONAL RECREATION
AREA
Cottonwood
PORTLAND
BURNS SPRING 2-10
MOHAVE CROSSING (Site)
Granite
Chalk
Tyro
Katherine
Hagen
Bates
Rest Rock
Cotton
Bitter
Squaw Pocket
Pass
Lost Cabin
Canyon
Junction
Wash
Spring
Canyon
Wash
Wash
Wash


ALL WILDERNESS/NO WILDERNESS ALTERNATIVE MAP 2-3
BLACK MOUNTAINS NORTH 2-09
BURNS SPRING 2-10
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT
BLACK MOUNTAINS NORTH 2-09
BURNS SPRING 2-10
LAKE MEAD
NATIONAL RECREATION
AREA
PORTLAND
Cottonwood
MOHAVE CROSSING (Site)
Granite Wash
Chalk Granite
Tyro Wash
Portland Wash
Burns Spring Canyon
Katherine
Cottonwood
Ranch
Red Rock
Basin
Tumbleweed
Sequoia Packed
Pass
Lost Cause Cabin
STANDARD
Smith
Greenwood
R22W
R21W
R20W
T25N
T24N
T23N
T22N
T21N
WSA BOUNDARY
VEHICLE WAYS
PUBLIC LANDS
STATE LANDS
PRIVATE LANDS
NON-FEDERAL MINERALS (WITHIN WSA)
0 1 2 3 4
SCALE IN MILES

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *All Wilderness* are the same as those planned under *Proposed Action/Partial Wilderness.*

No other resource actions or uses are anticipated.

No Wilderness Alternative (Map 2-3)

The *No Wilderness* alternative for the Black Mountains North WSA would return 19,900 acres to other multiple uses.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Six exploration projects would develop the basis for one large open-pit mine (T. 23 N., R. 21 W., sections 14 and 15), causing 250 acres of disturbance in the area, one large open-pit mine in T. 24 N., R. 21 W., section 22, one medium sized open-pit mine (T. 24 N., R. 21 W., section 36) and one small open-pit mine (T. 24 N., R. 21 W., section 4) disturbing 1,200 acres in the mine areas and 12 acres in eight miles of roads. The mines would have approximately 132 employees.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Livestock and rangeland actions would remain basically the same as under the *All Wilderness* alternative. A limited amount of vehicle way (2/3 mile) provides access for maintaining the eight miles of boundary fence on Unit B of Fort MacEwen grazing allotment once every five years.

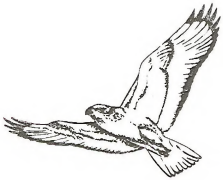
RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *No Wilderness* are the same as those planned under *All Wilderness.*

No other resource uses or actions are anticipated.



BURNS SPRING WSA
(AZ-020-10)

Proposed Action/Partial Wilderness Alternative (Map 2-2)

The *Proposed Action/(Partial Wilderness)* for the Burns Spring WSA would designate 23,000 acres as wilderness and 7,600 acres for other resource uses. This alternative differs from the All Wilderness alternative in that boundary adjustments would: 1) allow for the anticipated expansion of the Portland Mine and exclude an area of high mineral potential which includes an anticipated open-pit mine near the Portland Mine (Lost Cabin Wash area) of the WSA, 2) exclude three sections of the WSA on the north and east (surrounded on three sides by private land, thus unmanageable) and 3) allow continued vehicle use in Tyro Wash, access to Lake Mohave and exclude the areas south of Tyro Wash which includes one anticipated open-pit mine.

Under this alternative the following uses and actions are anticipated for the designated area.

MINERALS ACTIONS

One medium open-pit mine on federal minerals (T. 23 N., R. 21 W., section 34) and one medium open-pit mine on private minerals (T. 22 N., R. 21 W., section 3) would cause 600 acres of disturbance and employ 80 people. No new mining access is required.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Unit A of the Fort MacEwen allotment, under an allotment management plan, has seven miles of boundary fence and one spring development with 200 feet of buried PVC pipe to a 500-gallon trough. Three and one-half miles of vehicle way provide access for occasional use of motorized equipment on annual maintenance of the spring. The boundary fence would require maintenance by horseback every five years.

RECREATION USE ACTIONS

Wilderness designation would close 23,000 acres to motorized recreation use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Three existing springs and one existing pothole development would be maintained (Table 2-3). Access is now by one or more of the following: 4-WD vehicle, helicopter or foot travel (Table 2-4).

Access to the existing Lost Cabin Catchment No. 1 is by a wash for a total of 1½ miles in the WSA.

Access to the existing Chalk Spring is Granite Wash for a total of three miles. The rest of the way is by foot north to the spring.

Access to the existing Calles Spring is by the jeep trail originating off Portland Wash Road at T. 23 N., R. 21 W., section 22, and directly into section 27 to the spring, for a total of 3/4 mile in the WSA.

Access to Hidden Springs is by foot or helicopter.

The development of two additional waters in this unit is anticipated (Table 2-4). The field assessments have not been conducted and, therefore, exact locations are unknown. Maintenance schedules would be the same as those discussed under existing projects.

A desert tortoise survey and subsequent monitoring of tortoise populations would be conducted on foot.

The following uses and actions are anticipated in the 7,600 acres returned to other resource uses.

MINERALS ACTIONS

One exploration program would result in one large open-pit mine in T. 23 N., R. 21 W., sections 14, 15 and 22, one small open-pit mine in T. 22 N., R. 21 W., section 26, and one medium open-pit mine in T. 23 N., R. 21 W., section 12. The mines would disturb 950 acres and employ 92 workers. No new mining access required.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. One spring development on the Portland Spring Allotment has a total of 200 feet of buried PVC pipe to a 500-gallon trough. Two-thirds of a mile of vehicle way provides access for project maintenance. The project would be maintained without regard to wilderness regulations and constraints.

RECERATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions are anticipated.

All Wilderness Alternative (Map 2-3)

The *All Wilderness* alternative for the Burns Spring WSA would designate 30,600 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

On valid mining claims BLM expects one large open-pit mine (T. 23 N., R. 21 W., sections 14, 15 and 22), two medium open-pit mines (T. 23 N., R. 21 W., sections 12 and 34), one small small open-pit mine (T. 22 N., R. 21 W., section 26). One medium open-pit mine would be on private minerals (T. 22 N., R. 21 W., section 3). The total area of disturbance for the mining activities would be 1,500 acres plus another 12 acres for eight miles of new road construction. Additional activities would result from the 160 employees of the mines.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Livestock and rangeland actions would remain basically the same as under the *Proposed Action/Partial Wilderness* alternative. However, all projects, including the spring development on the Portland Spring Allotment, would be maintained with regard to wilderness constraints. Occasional use of motorized equipment would be scheduled for annual maintenance.

RECREATION USE ACTIONS

Wilderness designation would close 30,600 acres to motorized recreation use displacing 100 VDY of motorized use.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *All Wilderness* are the same as under the *Proposed Action/Partial Wilderness*.

No other resource actions or uses are anticipated.

No Wilderness Alternative (Map 2-3)

None of the Burns Spring WSA's 30,600 acres would be designated wilderness under the *No Wilderness* alternative.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Seven anticipated exploration projects are expected to result in one large open-pit mine (T. 23 N., R. 21 W., sections 14, 15 and 22), two medium open-pit mines (T. 23 N., R. 21 W., sections 12 and 34), one small open-pit mine (T. 22 N., R. 21 W., section 26) and one medium mine on private minerals (T. 22 N., R. 21 W., section 3). The total area of disturbance from mining activities would be 1,500 acres, plus another 12 acres for eight miles of new road construction. The mines would employ about 115 personnel.

RANGELAND MANAGEMENT ACTIONS

Livestock and rangeland actions would remain the same as under the *Proposed Action/Partial Wilderness* alternative.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *No Wilderness* are the same as planned under *Proposed Action/Partial Wilderness.*

No other resource actions or uses are anticipated.

MOUNT TIPTON WSA
(AZ-020-12/42)

Proposed Action/Partial Wilderness (Map 2-4)

The *Proposed Action/Partial Wilderness* for the Mount Tipton WSA would designate 28,170 acres as wilderness and return 5,890 acres to other resource uses. Boundary adjustments would eliminate an irregularly shaped appendage of WSA land which is isolated from the much more scenic main mass of the area. This eliminated area also contains some high mineral potential areas and a projected mine.

Under this alternative the following uses and action are anticipated for the designated area.

MINERAL ACTIONS

There would be one medium and one small open-pit mine in T. 25 N., R. 18 W., sections 8 and 17 (section 17 is private minerals). These mines would disturb 350 acres with three miles of new road construction disturbing five acres. Approximately 52 employees would work at the two mines.

LANDS ACTIONS

About 1.2 miles of road would be built across Section 32, T. 25 N., R. 18 W., to reach private land in section 33 of the same township. Total disturbance would be about two acres.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. The Mount Tipton Allotment's existing range improvements in the WSA are one mile of buried pipeline to a 300-gallon trough from a spring development outside the WSA, 0.3 mile of buried pipeline with a 4,000-gallon steel storage, two troughs, a corral and 3.75 miles of pasture fence.

The mile-long pipeline extends beyond the allotment boundary into an adjacent allotment outside the WSA, the Dolan Springs Allotment. The project serves this allotment as well.

A total of 1.3 miles of vehicle way provides access for the maintenance of pipelines. Mechanical equipment is required for maintenance once every year. The pasture fence has existing access for maintenance outside the WSA.

The Cane Springs allotment, under an Allotment Management Plan, has several range improvements in the WSA: three miles of pasture fence and one spring development, including 50 feet of surface pipe and one trough. There is no vehicular access for maintenance of these projects; all maintenance would be performed by hand.

The Quail Springs allotment, under an allotment management plan, has range improvements in the WSA: 3.8 miles of boundary fence, one mile of pasture fence, three hand-developed springs with a total of 1.25 miles of surface pipe to three 500-gallon troughs and 0.75 mile of surface pipe from a well outside the WSA to another facility also outside the area. An existing five miles of vehicle ways provide access for maintaining the above improvements.

No mechanical equipment is required for maintenance except to replace the 0.75 mile of pipe from the well or to carry material to the spring developments. Maintenance of a fence would be done by horseback every five years.

Proposed Range Improvements. Proposed range improvements planned for resource protection and effective management of resources are in T. 25 N., R. 18 W., section 13 and T. 25 N., R. 17 W., section 18 (spring developments).

Each of the above springs would be developed by hand. All materials would be packed or air lifted into the areas. Water would be piped for 50 feet through surface pipe to 500-gallon troughs.

RECREATION USE ACTIONS

Wilderness designation would close 28,170 acres to motorized recreation use displacing 100 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

No existing wildlife developments are in this WSA, but the development of four new waters is anticipated (Table 2-4). The field assessments have not been conducted for two of the waters and therefore exact locations are unknown. Locations for two other planned projects are found in Table 2-4. Four-wheel vehicles, helicopter and foot travel would be used to access these planned projects.

Vehicle access to the proposed Upper Indian Spring project begins at the jeep trail in T. 25 N., R. 18 W., section 18, SW¼, then east into section 17 past lower Indian Spring and continues into the northwest corner of section 16 at Upper Indian Spring. A total of 2¾ miles of vehicle access is used in the WSA.

Access to the proposed Mount Tipton catchment would be by helicopter and foot only.

VEGETATIVE SALES

Mohave Yucca harvest on 280 acres (Table 2-5) would be denied.

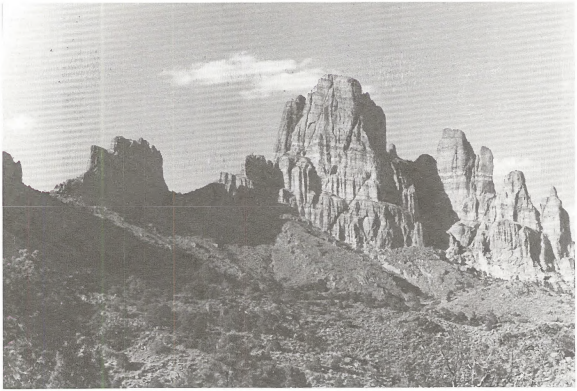
TABLE 2-5

WSA Areas Suitable for Mohave Yucca Harvest
Bureau of Land Management, Arizona

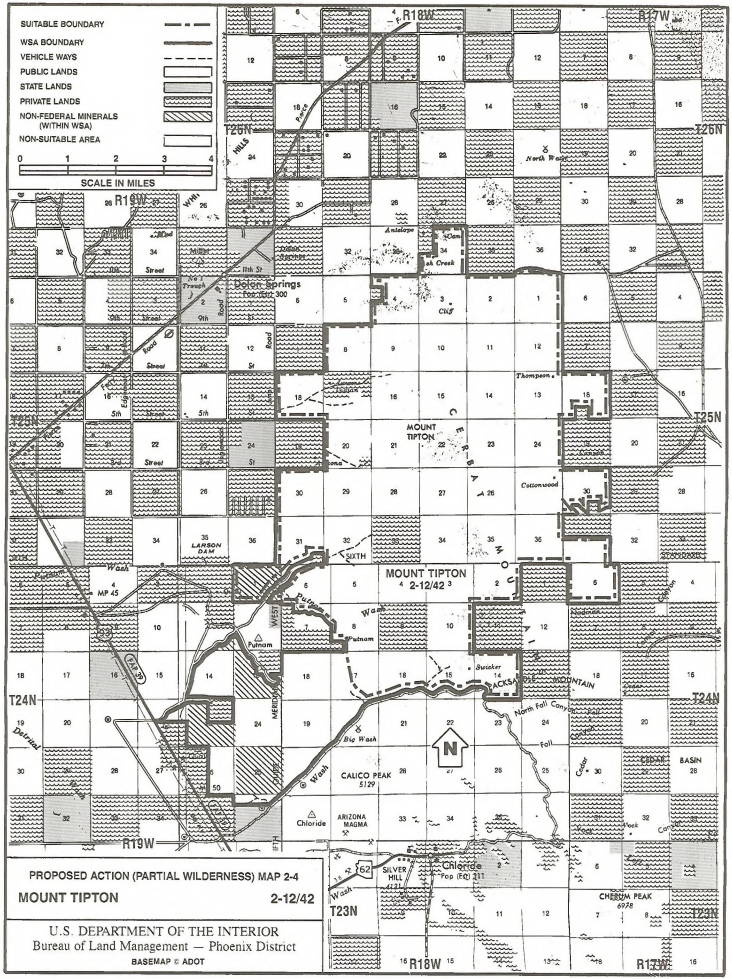
WSA	Acres Suitable for Harvest	Location		Year Last Harvested	Next Eligible Year for Harvest*
Mount Tipton	280	T. 25 N., R. 18 W.,	Section 18	—	1987
TOTAL:	280				
Mount Nutt	80	T. 20 N., R. 19 W.,	Section 4, NW¼	1982	2012
	80		Section 5, NE¼	1982	2012
	320		Section 8	1981	2011
				1980	2010
	150		Section 28	1978	2008
				—	
	120		Section 16, NW¼	—	1987
TOTAL:	630				
Warm Springs	20	T. 19 N., R. 18 W.,	Section 19, SW¼SW¼	—	1987
	620		Section 30	—	1987
	320		Section 31, N½	—	1987
	160		Section 32, NW½	—	1987
	640	T. 19 N., R. 19 W.,	Section 25	—	1987
	550		Section 26	—	1987
	600		Section 27	—	1987
TOTAL:	2,910				

*Based on a 30-Year Rotation Cycle. No harvest was done in 1987 or will be done until WSAs are released by Congress.

Source: Phoenix District Files



The Cerbat Mountain Pinnacles - Mount Tipton.



PROPOSED ACTION (PARTIAL WILDERNESS) MAP 2

MOUNT TIPTON 2-12/42

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District

BASEMAP © ADOT

The following uses and actions are anticipated for the 5,890 acres returned to other resource uses.

MINERALS ACTIONS

One exploration program and a large open-pit mine would disturb 600 acres on the township boundary between T. 24 N., R. 18 W., and 19 W., section 25. Section 25 is a private mineral estate. No new mining access required. Approximately 40 employees would work at the mine.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. One spring development and three-quarters mile of pasture fence on the Quail Springs Allotment would be maintained without regard to wilderness constraints. Existing vehicle way of one-quarter mile provides access to the spring.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions or uses are anticipated.

All Wilderness Alternative (Map 2-5)

The *All Wilderness* alternative for the Mt. Tipton WSA would designate 34,060 acres as wilderness.

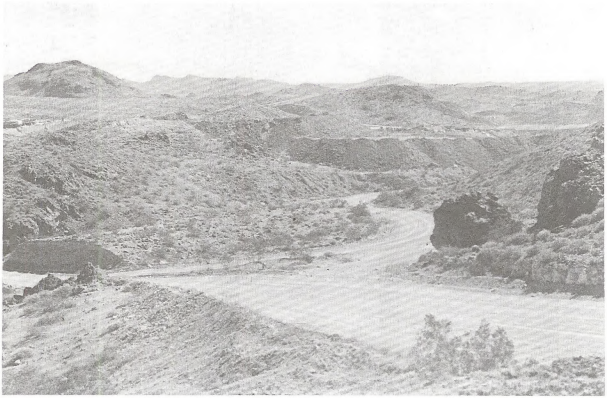
Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

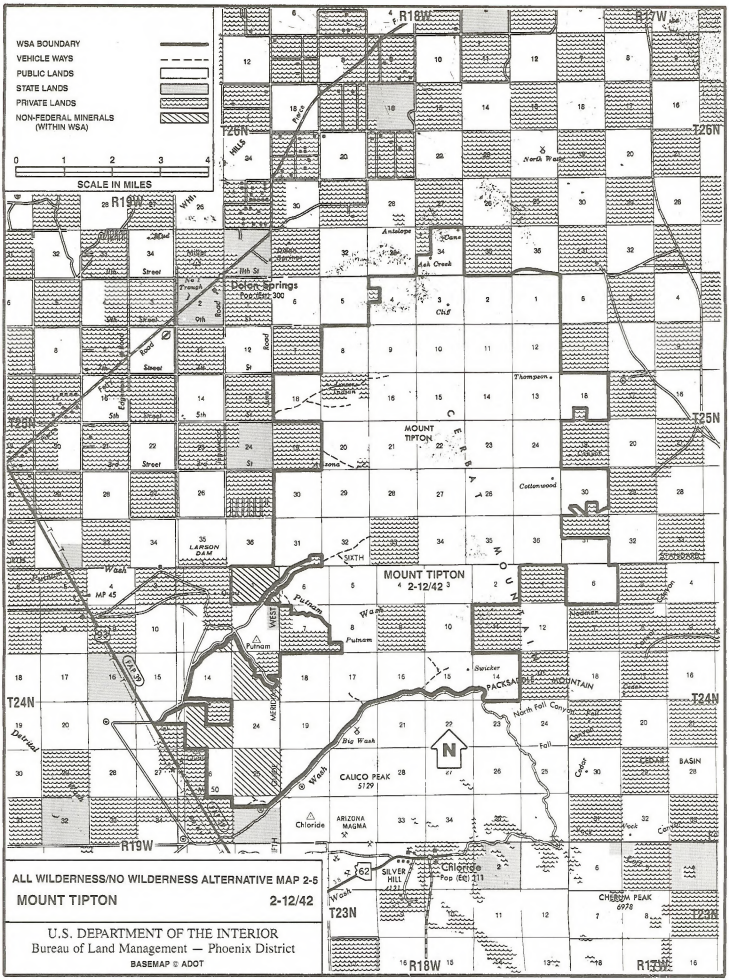
There would be: 1) one large open-pit mine at the township boundary between sections 25 and 30, T. 24 N., R. 18 and 19 W., G&SRM (section 25 is on private minerals), disturbing 600 acres and 2) one medium and one small open-pit mine in T. 25 N., R. 18 W., sections 8 and 17 (section 17 is private minerals), disturbing 350 acres, with another seven acres involved in five miles of new road construction. Approximately 92 employees would work at the three mines.

LANDS ACTIONS

Approximately 1.2 miles of road would be built across section 32, T. 25 N., R. 18 W., to reach private land in section 33 of the same township. Total disturbance would be about two acres.



The Portland Mine lies between the Burn Springs and Black Mountains North WSA.



ALL WILDERNESS/NO WILDERNESS ALTERNATIVE MAP 2-5

MOUNT TIPTON 2-12/42

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District

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RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Livestock and rangeland actions would remain basically the same as under the *Proposed Action/Partial Wilderness* alternative. All identified improvements would be managed under wilderness constraints. One spring development and three-quarters mile of pasture fence on Quail Springs would be included in the WSA management area. The spring would require annual use of motorized equipment for maintenance. The fence would continue to be maintained from horseback once every five years.

Remaining vehicle way of 1.5 miles accessing various fence projects would no longer be used. All maintenance access would be by horseback.

Proposed Range Improvements. Proposed spring range improvements planned for resource protection and effective management of resources are in T. 25 N., R. 18 W., section 13 and T. 25 N., R. 17 W., section 18.

Each of the above springs would be developed by hand. All materials would be packed or airlifted into the areas. Water would be piped for 50 feet through surface pipe to 500-gallon troughs.

RECREATION USE ACTIONS

Wilderness designation would close 34,060 acres to motorized recreation use displacing 100 VDY of motorized use.

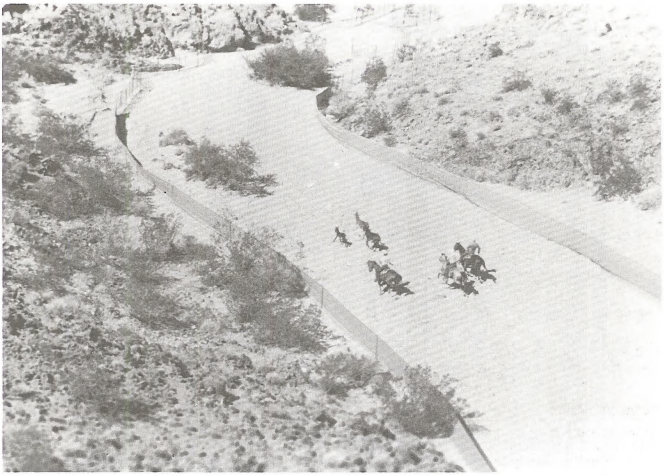
WILDLIFE MANAGEMENT ACTIONS

The actions planned under *All Wilderness* are the same as planned under the *Proposed Action/Partial Wilderness*.

VEGETATIVE SALES

Mohave Yucca harvest on 280 acres (Table 2-5) would be denied.

No other resource actions or uses are anticipated.



Wing Trap in Granite Wash - Burns Spring WSA.

No Wilderness Alternative (Map 2-5)

The Mt. Tipton WSA's 34,060 acres would be returned to other resource uses under the *No Wilderness* alternative.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Four exploration projects in the Mount Tipton WSA would produce: 1) one large open-pit mine at the township boundary between sections 25 and 30 of T. 24 N., R. 18 and 19 W. (section 25 is private minerals), disturbing 600 acres and 2) one large open-pit mine in T. 25 N., R. 18 W., sections 8 and 17 (section 17 is private minerals), disturbing 600 acres with another seven acres involved in five miles of new road construction. The two mines would employ about 80 people and disturb a total of 1,207 acres.

LANDS ACTIONS

Approximately 1.2 miles of road would be built across section 32, T. 25 N., R. 18 W., to reach private land in section 33 of the same township. Total disturbance would be about two acres.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Livestock and rangeland actions would be basically the same as under the *Proposed Action/Partial Wilderness* alternative. However, no wilderness constraints would be applied to the use of motorized equipment in order to maintain nine water developments with 5.5 miles of existing vehicle way.

Proposed Range Improvements. Proposed range improvements planned for resource protection and effective management of resources are the same as planned under the *Proposed Action/Partial Wilderness*.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *No Wilderness* are the same as planned under the *Proposed Action/Partial Wilderness*, except there would be no restraints on the use of motorized equipment.

VEGETATIVE SALES

The 280 acres of Mohave yucca along the west boundary of the WSA (Table 2-5) are suitable for harvest, subject to BLM stipulations. This area would be harvested on a 30-year rotation cycle.

No other resource actions are anticipated.

GRAPEVINE WASH WSA
(AZ-020-14)

Proposed Action/No Wilderness Alternative (Map 2-6)

The *Proposed Action/No Wilderness* for the Grapevine Wash WSA would return 2,200 acres to other multiple use management.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

One exploration project would lead to development of one medium open-pit mine, T. 30 N., R. 16 W., section 10 and 15, disturbing 300 acres in the mine site and another one acre in the one mile of access road. The new mine would employ 40 people.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource uses or actions are anticipated.

All Wilderness Alternative (Map 2-6)

The *All Wilderness* alternative for the Grapevine Wash WSA would designate 2,200 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

RECREATION USE ACTIONS

Wilderness designation would close 2,200 acres to motorized recreation use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

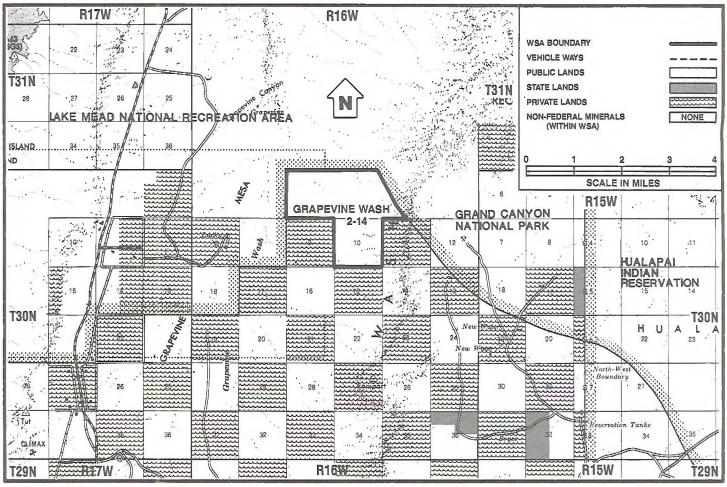
No other resources or actions are anticipated.

GRAND WASH CLIFFS WSA
(AZ-020-15)

Proposed Action/No Wilderness Alternative (Map 2-7)

The *Proposed Action/No Wilderness* alternative for the Grand Wash Cliff WSA would return 12,176 acres to other multiple uses.

Under this alternative the following actions and uses are anticipated.


R17W
R16W
R15W
T31N
T30N
T29N
LAKE MEAD NATIONAL RECREATION AREA
GRAPEVINE WASH
2-14
GRAND CANYON
NATIONAL PARK
HUALAPAI
INDIAN
RESERVATION
H U A L A
MESA
Grapevine Wash
Preservation Tanks
WSA BOUNDARY
VEHICLE WAYS
PUBLIC LANDS
STATE LANDS
PRIVATE LANDS
NON-FEDERAL MINERALS
(WITHIN WSA)
NONE
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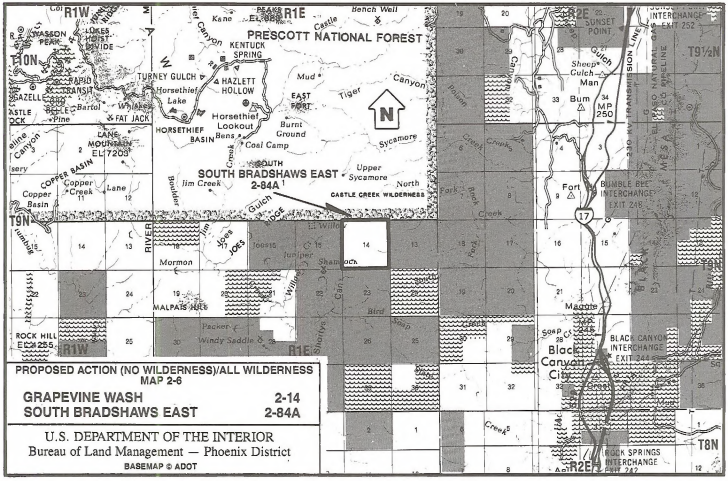
SCALE IN MILES


R1W
R1E
R2E
T10N
T9N
T8N
PRESCOTT NATIONAL FOREST
KENTUCK SPRING
HAZLETT HOLLOW
TURNEY GULCH
Horsethief Lake
HORSETHIEF BASIN
Horsethief Lookout
Burnt Ground
Coal Camp
EAST FORT
Mud Canyon
Tiger Canyon
Sycamore
Upper Sycamore
North
SOUTH BRADSHAWS EAST
2-84A
CASTLE CREEK WILDERNESS
Jim Creek
Copper Creek
COPPER BASIN
LANE MOUNTAIN
EL 7203
FAT JACK
Mormon
MALPAIS MESA
Packer
Windy Saddle
ROCK HILL
EL 3255
Sheep Gulch
Man
Bum
MP 250
Fort
Magna
Black Canyon City
SOAP CREEK
BLACK CANYON INTERCHANGE
EXIT 244
BUMBLE BEE INTERCHANGE
EXIT 242
ROCK SPRINGS INTERCHANGE
EXIT 232
SUNSET POINT
INTERCHANGE
EXIT 252
PROPOSED ACTION (NO WILDERNESS)/ALL WILDERNESS
MAP 2-6
GRAPEVINE WASH 2-14
SOUTH BRADSHAWS EAST 2-84A
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
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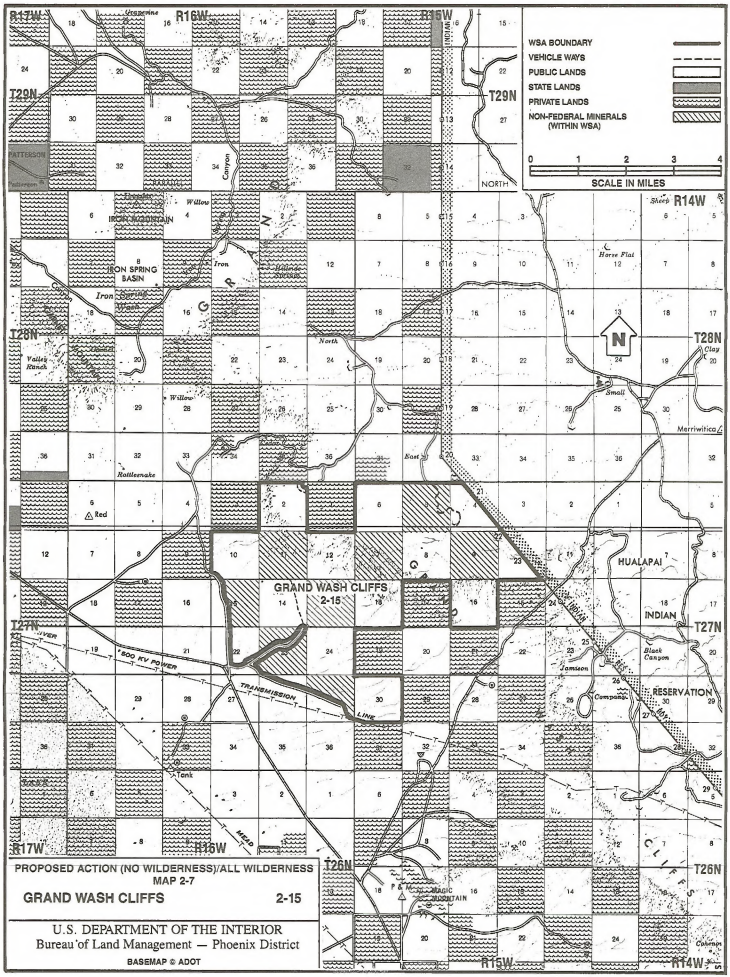

PROPOSED ACTION (NO WILDERNESS)/ALL WILDERNESS
MAP 2-7

GRAND WASH CLIFFS 2-15

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District

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MINERALS ACTIONS

Four exploration projects would result in the development of one medium sized underground mine in section 14, T. 27 N., R. 16 W., disturbing 50 acres and one acre for 0.6 mile of access roads. The mine would require about 30 employees.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. A total of 0.5 mile of pasture fence is on the Clay Springs Allotment within the WSA. There is no vehicular access to the project so horses are used.

An allotment management plan has been developed for the Upper Music Allotment. Range improvements are six miles of boundary or pasture fence, one spring development with storage and trough, one reservoir and a rainwater catchment including an 80,000-gallon storage tank and trough plus exclosure.

A total of three miles of existing vehicle way would be used in the maintenance of the above waters with mechanical equipment required.

Fencing maintenance access is by horseback every five years.

In addition, 2.75 miles of fenceline were mechanically cleared within the area and 800 acres subsequently prescribe-burned and aerially reseeded with non-native species of wild rye, crested wheatgrass and western wheatgrass. The project would be maintained every five years with mechanical equipment.

Proposed range improvements. The one proposed range improvement planned for resource protection and effective management is a well to be drilled in, T. 27 N., R. 16 W., section 14, which would require access for the drill rig over one mile of existing vehicle way. If suitable water is found, a windmill, a 20,000-gallon concrete storage painted to blend into the surrounding environment and a trough would be installed. Total disturbance would be 0.5 acre.

A prescribed burn in sagebrush with the use of a terra-torch is proposed. Approximately 110 acres of the burn is within the WSA (the total burn involves 900 acres). That portion of the project within the WSA has undergone juniper chaining or wildfire in the past. Firing from the torch would take place from points on an existing road outside the WSA. A total of 1.5 miles of 25-foot-wide fire line would be mechanically cleared. The area would be allowed to vegetate naturally following the burn.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Maintenance of one existing catchment is planned with access by 4-WD vehicle, helicopter and foot travel (see Table 2-3).

Vehicle access to the existing Music Mountain Catchment No. 8 begins on the vehicle way at T. 27 N., R. 15 W., section 5, NW¼NE¼, and is followed to Lost Creek Reservoir in section 5, then south into section 8. At the fork in the wash in the northeast corner of section 8 the southern fork is taken until a vehicle way is reached at a wash fork in the SW¼NE¼ of section 8. From here vehicles climb out of the wash and head west on the vehicle way to the catchment. A total of 2¾ miles of vehicle access is used in the WSA.

The development of one additional water in this unit is planned (Table 2-4). Maintenance schedules would be the same as for existing projects. Total disturbance would be 0.5 acre.

The one mile of vehicle access to the proposed Slickrock Catchment (Table 2-4) begins on the jeep trail at T. 27 N., R. 16 W., section 14, SE¼SE¼, and follows a wash north through section 14 where it ends at the NWNE¼ of section 14. Then foot travel is required.

No other resource actions are anticipated.

All Wilderness Alternative (Map 2-7)

The *All Wilderness* alternative for the Grand Wash Cliffs WSA would designate 12,176 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

One medium-sized underground mine (employing 24 people) in section 14, T. 27 N., R. 16 W., G&SRM would disturb 50 acres and one acre for 0.6 mile of access road.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. Livestock and rangeland actions would remain basically the same as under the *Proposed Action/No Wilderness* alternative. It is important to recognize that occasional use of motorized equipment would be required for annual maintenance of the spring development, reservoir and rainwater catchment.

Proposed Range Improvements. The proposed well drilling project in T. 27 N., R. 16 W., section 14, would require design modification in order to be compatible with wilderness values. Use of motorized equipment would be regulated.

RECREATION USE ACTIONS

Wilderness designation would close 12,176 acres to ORV use. Visitor use would decrease to 80 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Management actions are the same as those listed under the *Proposed Action/No Wilderness* alternative.

No other management actions or uses are anticipated.

MOUNT DAVIS WSA
(AZ-020-21)

Proposed Action/No Wilderness Alternative (Map 2-1)

The *Proposed Action/No Wilderness* alternative for the Mount Davis WSA would return 2,560 acres to other multiple use management.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Two exploration projects in the Mount Davis WSA would result in one medium open-pit mine in T. 26 N., R. 21 W., section 30. Total disturbance would be 300 acres in the mine area and another three acres in the two miles of access road. Operation would require about 40 people.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Maintenance of one existing development is planned with access by 4-WD vehicle and helicopter (see Table 2-3).

Access to the existing Mount Davis Catchment is by the wash originating in the southwest of T. 25 N., R. 22 W., section 22 (¼ mile in the WSA).

The development of one additional water in this unit is anticipated (Table 2-4). The field assessment has not been conducted and therefore the exact location is unknown. Maintenance schedules would be the same as those discussed for the existing project. Surface disturbance would be 0.25 acre.

An on-foot desert tortoise survey and subsequent monitoring of tortoise populations within the WSA are anticipated.

No other management actions or uses are anticipated.

All Wilderness Alternative (Map 2-1)

The *All Wilderness* alternative for the Mount Davis WSA would designate 2,560 acres as wilderness.

Under this alternative the following actions and uses are expected.

MINERALS ACTIONS

Management actions are the same as those shown under the *Proposed Action/No Wilderness* alternative except no exploration programs.

RECREATION USE ACTIONS

Wilderness designation would close 2,560 acres to motorized recreation use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Management actions are the same as those listed under the *Proposed Action/No Wilderness* alternative.

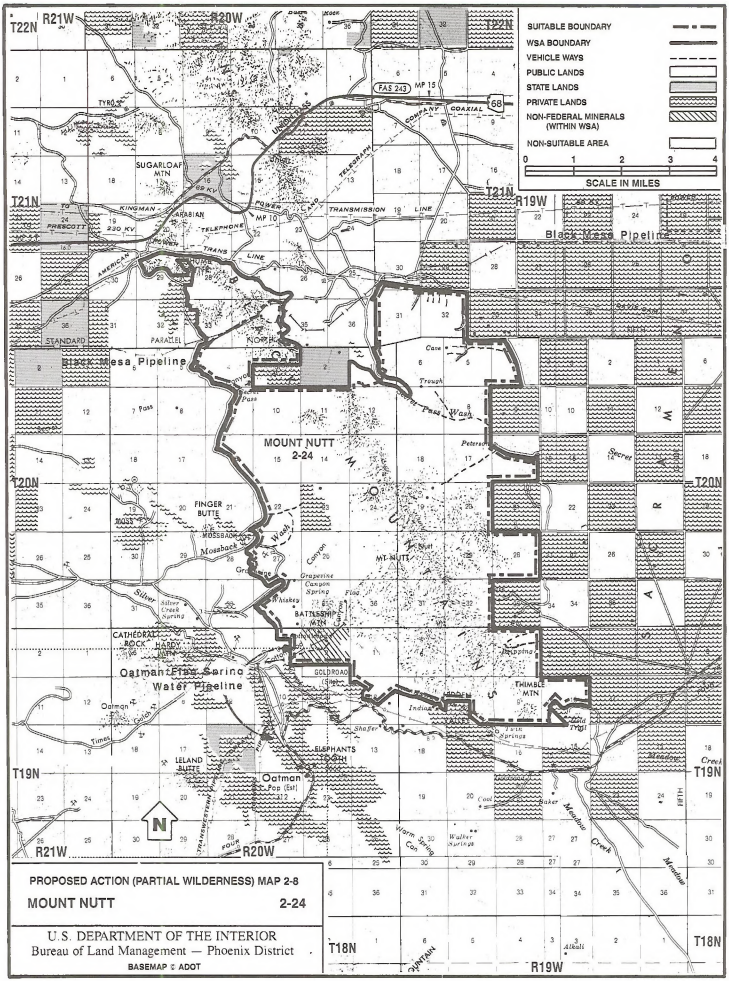
No other management actions or uses are anticipated.

MOUNT NUTT WSA
(AZ-020-24)

Proposed Action/Partial Wilderness Alternative (Map 2-8)

The *Proposed Action/Partial Wilderness* for the Mount Nutt WSA would designate 27,210 acres as wilderness and return 1,980 acres to other resource uses. This alternative differs from the *All Wilderness* alternative in that the northwest boundary would be adjusted to remove most of an irregularly shaped appendage of land which is isolated from the main mass of the WSA. This eliminated area also contains a 2.5-mile segment of a large coal slurry pipeline and associated maintenance trail, some high mineral potential areas and a projected medium sized open-pit mine. Another small area in the north-central portion of the WSA, which is currently undergoing intensive mineral exploration preliminary to a probable medium sized open-pit mine, and also a very small tract at the southeast corner of the WSA would be removed. A jeep trail in this area allows for the only practical access to a patented mining claim outside of the WSA, but surrounded by the same on three sides.

Under this alternative the following uses and actions are anticipated for the designated area.



PROPOSED ACTION (PARTIAL WILDERNESS) MAP 2-8

MOUNT NUTT 2-24

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MINERALS ACTIONS

There would be one medium underground mine at section 27, T. 20 N., R. 20 W., two small (hand-dug and operated) open-pit mines at section 12, T. 19 N., R. 20 W., and section 30, T. 20 N., R. 19 W., for fire opal, each disturbing one acre, and one medium open-pit mine and one associated medium underground mine in section 7, T. 20 N., R. 20 W. Total disturbed acreage would be 408 acres, including four miles of access roads. No vehicle access would be needed to the fire opal mine in section 30. The mines would employ about 104 people.

LANDS ACTIONS

Necessary yearly maintenance activities on the Oatman water pipeline (2.5 miles in the WSA) from Flag Springs would be pipe replacement, repair and monitoring.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. An allotment management plan has been developed for the Black Mountain Allotment. Several range improvements exist: 2.8 miles of boundary or pasture fence (limited access over 0.3 mile of vehicle way) and three spring developments with 2.3 miles of buried pipeline (access over 2.8 miles of vehicle way.)

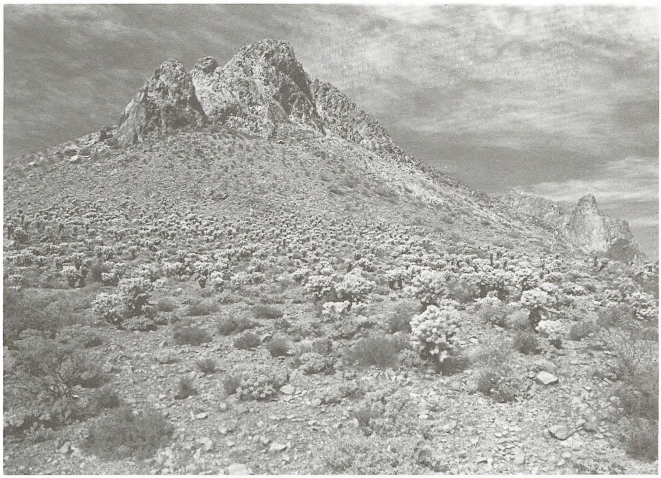
Most fenceline maintenance (2.5 miles) is done every five years using horses for access.

Mechanical equipment is needed for the maintenance of each of the three spring developments once every year.

Proposed Range Improvements. Proposed range improvements are planned for resource protection and effective management of resources.

A total of 3.5 miles of boundary fence in T. 20 N., R 20 W., section 1, and T. 20 N., R 19 W., sections 28 and 32, is planned. Access to the two areas is available from outside the WSA and all materials would be packed to the actual locations. Fence posts would be a color that blends into the surrounding environment.

Proposed reconstruction of 1.8 miles of buried pipeline (in T. 20 N., R. 19 W., sections 16, 17, 18 and 19) from an existing spring development would require a backhoe during construction. The pipeline would follow the original route along an existing vehicle way to a storage tank and trough outside the WSA.



Cholla Patch - Mount Nutt WSA.

CULTURAL RESOURCE ACTIONS

The main actions would be the protection of pictograph sites and possible future excavations at Bighorn Cave. The work would be accomplished with hand tools or under the "minimum tool policy."

RECREATION USE ACTIONS

Wilderness designation would close 27,210 acres to motorized recreation use displacing 1,100 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Maintenance of four existing springs and two planned pothole developments would require access by 4-WD vehicle, helicopter or foot travel as listed below.

Vehicle access to the existing Upper Twin Spring is by Peterson Well in T. 20 N., R. 19 W., section 16, to a wash and southwest through section 17 to the SW¼SW¼. Foot travel is required for another one-half mile to the spring. A total of one and one-quarter miles of vehicle access is in the WSA.

Vehicle access to the existing Trough Spring begins at T. 20 N., R. 19 W., section 8, SE¼SE¼SE¼SE¼, goes up a wash through the south half of section 8 and, at section 7, turns northwest and leads directly to the spring. A total of two miles of vehicle access is in the WSA.

Vehicle access to the existing Ram Spring begins at the jeep trail in T. 21 N., R. 19 W., section 31, NE¼NE¼ and, where the trail ends, turns into a wash, giving access to the spring. A total of one-third mile of vehicle access is in the WSA.

Vehicle access to the existing Slurry Tank begins in the wash in T. 21 N., R. 20 W., section 35, NW¼, continues northwesterly for three-quarter mile, then southwesterly for another one-half mile, following an existing pipeline. A total of one and one-quarter miles of vehicle access is in the WSA.

The three abandoned wildlife water developments in this WSA are Grapevine Tank, Raptor Tank and WL Spring (Table 2-3). The two potholes have completely washed out due to flooding and the unproductive spring is silted in. Access is not needed to these three projects.

The development of four additional waters in this unit is anticipated (Table 2-4). The field assessments have not been conducted for two of the waters and, therefore, exact locations are unknown. The two other planned waters are Cottonwood Tanks and Cave Spring. Maintenance schedules would be the same as those discussed for existing projects.

Vehicle access to the proposed Cottonwood Tanks project starts at the jeep trail in T. 20 N., R. 20 W., section 22, SW¼, and continues east one mile up into the main wash at T. 20 N., R. 20 W., section 23, NW¼. Then foot travel is required. A total of one mile of vehicle access is in the WSA.

Vehicle access to the proposed Cave Spring project starts at a vehicle way in T. 20 N., R. 19 W., section 5, NE¼, and continues westerly for one-quarter mile where the vehicle is parked and foot travel is required. A total of one-quarter mile of vehicle access is in the WSA.

An on-foot desert tortoise survey and subsequent monitoring of tortoise populations within the WSA are anticipated.

VEGETATIVE SALES

Mohave Yucca harvest on 630 acres along the eastern boundary of the WSA would be denied (Table 2-5).

The following uses and actions are anticipated in the 1980 acres returned to other resource uses.

MINERALS ACTIONS

Two exploration projects would result in two medium open-pit mines at section 1, T. 20 N., R. 20 W., and section 28, T. 21 N., R. 20 W. Total disturbed acreage would be 600 acres and the mines would employ about 80 people. No new mining access required.

LANDS ACTIONS

Yearly maintenance activities on the Black Mesa Pipeline coal slurry line would be pipe replacement, repair and monitoring.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions or uses area anticipated.

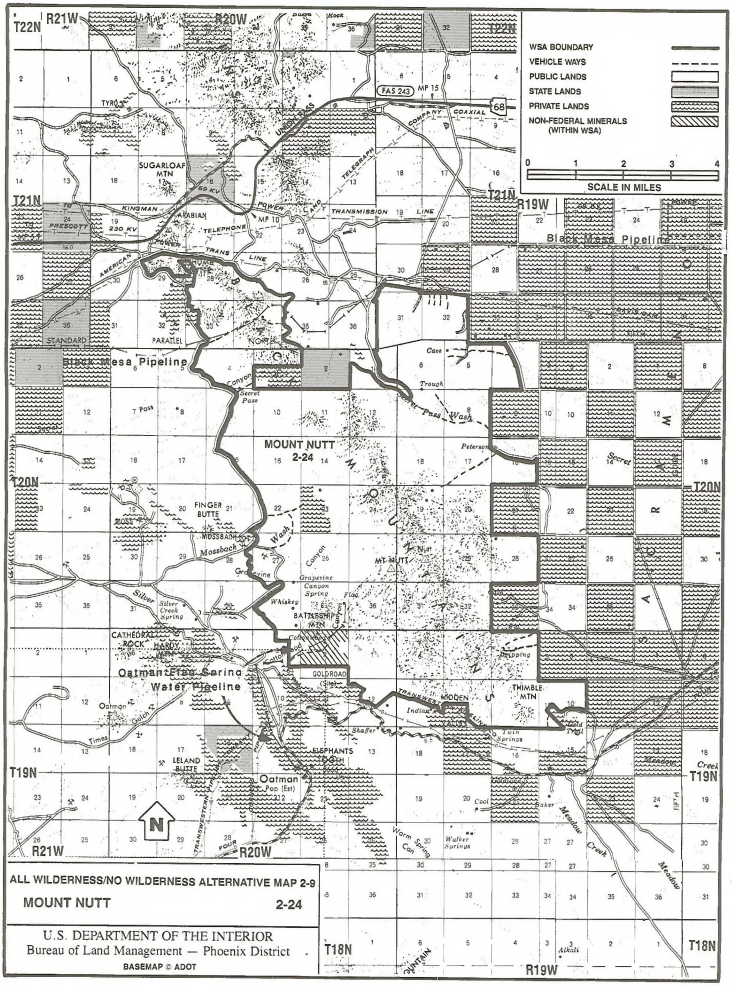
All Wilderness Alternative (Map 2-9)

The *All Wilderness* alternative for the Mount Nutt WSA would designate 29,190 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

There would be two medium open-pit mines at section 1, T. 20 N., R. 20 W., and section 28, T. 21 N., R. 20 W., one medium underground mine at section 27, T. 20 N., R. 20 W., and two small (hand-dug and operated) open-pit mines at section 12, T. 19 N., R. 20 W., and at section 30, T. 20 N., R. 19 W, for fire opal, each disturbing one acre and one medium open-pit mine and one associated medium underground mine in section 7, T. 20 W., R. 19 W. Total disturbed acreage is 958 acres including four miles of access roads. The mines would employ about 154 people.



ALL WILDERNESS/NO WILDERNESS ALTERNATIVE MAP 2-9

MOUNT NUTT 2-24

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LANDS ACTIONS

Yearly maintenance activities on the Black Mesa Pipeline coal slurry line are pipe replacement, repair and monitoring. No impacts to naturalness would result except during the actual activity.

Yearly maintenance activities on the Oatman water pipeline from Flag Springs would be pipe replacement, repair and monitoring. No impacts to naturalness would occur except during the actual activity.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. The actions are the same as under the *Proposed Action/Partial Wilderness* alternative. It is important to recognize that occasional use of motorized equipment would be required for maintenance and construction of all water developments. Access is available over 4.6 miles of existing vehicle way.

CULTURAL RESOURCE ACTIONS

The main actions would be the protection of pictograph sites and possible future excavations at Bighorn Cave. The work would be accomplished with hand tools or under the "minimum tool policy."

RECREATION USE ACTIONS

Wilderness designation would close 29,190 acres to motorized recreation use displacing 1,200 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *All Wilderness* are the same as under the *Proposed Action/Partial Wilderness*.

VEGETATIVE SALES

Yucca harvest on 630 acres of land (Table 2-5) would be denied.

No other resource actions or uses are anticipated.

Rock cave near Trough Spring in the Black Mountains - Mount Nutt WSA.

Enhanced Wilderness Alternative (Map 2-10)

The *Enhanced Wilderness* alternative differs from the *Proposed Action/Partial Wilderness* alternative in that 650 acres of land acquired through exchanges along the southern and northern boundaries of the WSA have been included in the 27,860 acres designated wilderness. The 1980 acres would be returned to other resource uses. Total VDY would be 100 motorized and 3,000 nonmotorized.

Under this alternative, the management actions and uses would be the same as the *Proposed Action/Partial Wilderness*.

No Wilderness Alternative (Map 2-9)

The *No Wilderness* alternative for the Mourit Nutt WSA would return 29,190 acres to other multiple use management.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

A total of 12 exploration projects would result in one large open-pit at section 1, T. 20 N., R. 20 W., one medium open-pit mine at section 28, T. 21 N., R. 20 W., one medium underground mine at section 27, T. 20 N., R. 20 W, and two small, hand-dug and operated open-pit mines at section 12, T. 19 N., R. 20 W., and section 30, T. 20 N., R. 19 W. for fire opal. Each opal mine would disturb one acre and one medium open-pit mine and one associated medium underground mine in section 7, T. 20 N., R. 19 W. Two small open-pit gold mines would also be opened in sections 7 and 9, T. 19 N., R. 19 W. Total disturbed acreage is 1,409 acres, including five miles of access roads. Mining activities would employ about 208 people.

LANDS ACTIONS

Yearly maintenance activities on the Black Mesa Pipeline coal slurry line and the Oatman water pipeline from Flag Springs would be pipe replacement, repair and monitoring.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. The livestock and rangeland actions would remain basically the same as under the *Proposed Action/Partial Wilderness* alternative. However, access to range improvements and use of motorized equipment would not be regulated under wilderness constraints. A total of .3 mile of limited access, precluded from use under wilderness status, would continue to be used in the maintenance of 2.8 miles of fenceline. Unregulated access and use of motorized equipment over 4.6 miles of existing vehicle way would be necessary in order to maintain or construct any of the four water developments.

CULTURAL RESOURCE ACTIONS

The main actions would be the protection of pictograph sites and possible future excavations at Bighorn Cave. These actions would involve setting up a work camp including water tanks, generators and living quarters (trailers).

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *No Wilderness* are the same as under the *Proposed Action/Partial Wilderness*.

VEGETATIVE SALES

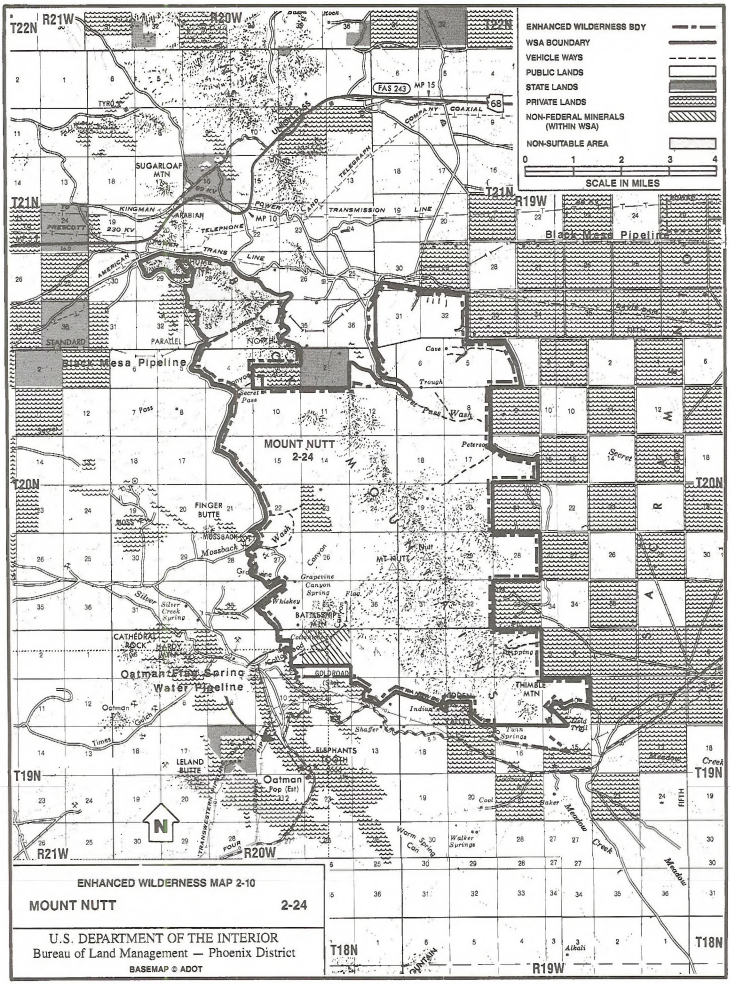
Approximately 630 acres of land along the east boundary of the WSA are suitable for Mohave yucca harvest, subject to BLM stipulations (Table 2-5). Harvest schedules are based on a 30-year rotation cycle. Between 1978 and 1982, 1,270 acres were harvested. This area will not be subject to reharvest until 2008-2012.

No other resource actions or uses are anticipated.

WARM SPRINGS WSA
(AZ-020-28/29)

Proposed Action/Partian Wilderness Alternative (Map 2-11)

The *Proposed Action/Partial Wilderness* for the Warm Springs WSA would designate 90,600 acres as wilderness and return 24,200 acres to other resource uses. This alternative differs from the *All Wilderness* alternative in that boundary adjustments would: 1) remove a large wedge-shaped parcel of land with lower wilderness values in the south-central portion of the WSA, 2) exclude a 5,500-acre area with high mineral potential (and one anticipated zeolite mine) in the McHeffy Butte area, 3) extend a one mile cherrystemmed jeep trail up to the Warm Springs site (administrative use only allowed for this road for wildlife and wild burro management; both sides of this area are bordered by jeep trails which access Warm Springs, a very important burro capture area), and 4) delete an area in the east-central portion of the WSA to align the eastern boundary with the west side of a nine-mile segment of Sacramento Wash. This will make the boundary much more definable and will delete a small area east of (and including) the wash that would be difficult to manage as wilderness because of vehicle use in this broad, sandy drainage.



ENHANCED WILDERNESS MAP 2-10

MOUNT NUTT 2-24

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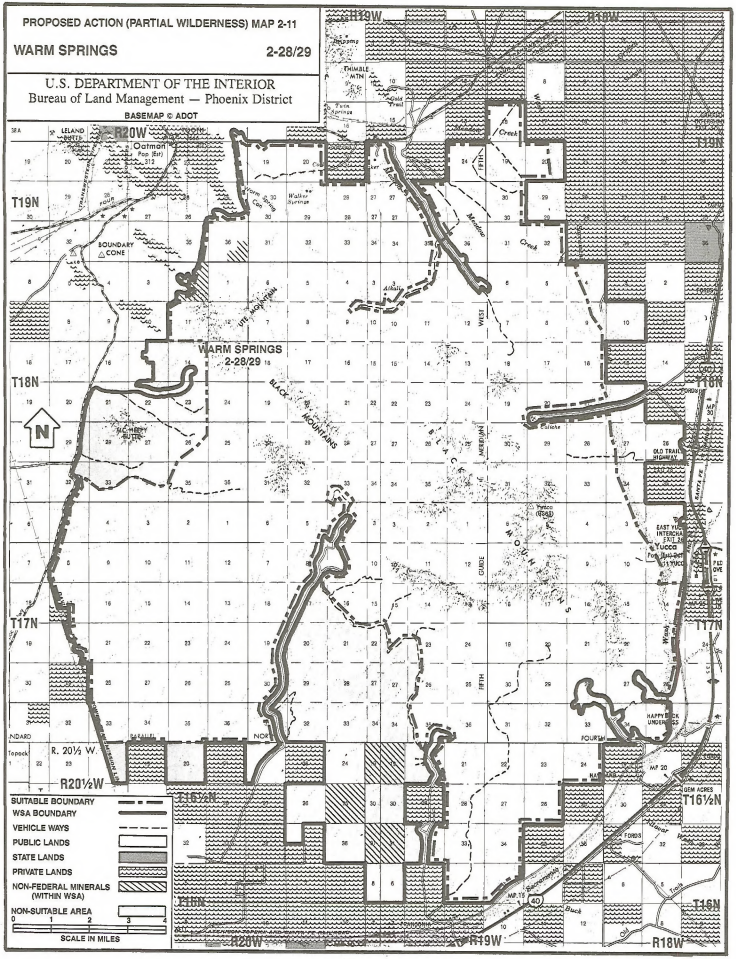
PROPOSED ACTION (PARTIAL WILDERNESS) MAP 2-11
WARM SPRINGS
2-28/29
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R20W
R19W
R18W
T19N
T18N
T17N
T16½N
T16N
T15N
WARM SPRINGS
2-28/29
BLACK MOUNTAINS
BOUNDARY CONE
Oatman
Pop. (est) 115
LELAND
Walker Springs
Mineral Creek
Alluvial
Black
Colorado
Bouse Wash
Topock
R. 20½ W
R20½W
SUITABLE BOUNDARY
WSA BOUNDARY
VEHICLE WAYS
PUBLIC LANDS
STATE LANDS
PRIVATE LANDS
NON-FEDERAL MINERALS (WITHIN WSA)
NON-SUITABLE AREA
0 1 2 3 4
SCALE IN MILES

A total of three cherrystemmed roads will be closed. These cherrystemmed roads access old mine exploration scars and receive little vehicle use. The north-central boundary will be adjusted to provide a cherrystem road access to Antelope/Alkali Springs. These springs are very important to bighorn sheep and burro management.

Under this alternative the following uses and actions are anticipated in the designated area.

MINERALS ACTIONS

There would be one large underground gold mine in section 30, T. 19 N., R. 19 W., one small underground mine in section 36, T. 19 N., R. 20 W., and one small open-pit mine in section 1, T. 18 N., R. 19 W., G&SRM. About 155 acres and 82 workers would be involved. No new mining access required.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. An Allotment Management Plan has been developed for the Black Mountain Allotment. There are 4.6 miles of boundary fence and two springs developments in the WSA.

All of the fenceline is maintained via horseback, but the spring has been developed and would be maintained by backhoe or other mechanized equipment. One half mile of existing vehicle way provides access to the spring for required annual maintenance.

Proposed Range Improvements. Proposed range improvements are planned for resource protection and effective management of resources.

Proposed is a total of 6.5 miles of boundary fence in T. 19 N., R. 19 W., section 24, T. 19 N., R. 18 W., sections 18, 20, 29 and 32, and T. 19 N., R. 18 W., section 5. Access to the general area is available through Sacramento Wash and materials would be packed into the site. Fence posts would be a color that blends into the surrounding environment. Minimal surface disturbance would be incurred.

RECREATION USE ACTIONS

Wilderness designation would close 90,600 acres to motorized recreation use displacing 450 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Planned maintenance of six existing springs and three existing pothole developments would require use of some or all of the currently used 4-WD vehicles, helicopter and foot travel (Table 2-3).

Vehicle access to existing Sheep Spring, Columbine Spring and Metate Spring is the same for all three. Vehicles enter the WSA on the jeep trail at T. 18 N., R. 20 W., section 32, continue west for four miles and then into a wash for the last three miles. At T. 18 N., R. 20 W., section 36, SE¼, the vehicle is parked and foot travel is required to reach the springs. A total of four miles of vehicle access is in the WSA.

Vehicle access to existing Antelope Spring begins at the jeep trail in T. 19 N., R. 19 W., section 35, NE¼, continues south through T. 19 N., R. 19 W., section 35, and then southwest through T. 18 N., R. 19 W., section 2. The trail drops into a wash to a turnoff to Alkalai Spring in T. 18 N., R. 19 W., section 10, then out of the wash onto a way in T. 18 N., R. 19 W., section 9. A total of 3½ miles of vehicle access is used in the WSA. The development of five additional waters in this unit is anticipated (Table 2-4). The field assessments have not been conducted on two of the projects so exact locations are unknown. Exact locations for three of the planned waters are known. Maintenance schedules would be the same as those discussed for existing projects.

Access to the proposed spring in T. 18 N., R. 19 W., section 4, SW¼NE¼, begins at the jeep trail in T. 19 N., R. 19 W., section 35, NE¼, then south through T. 19 N., R. 19 W., section 35, southwest through T. 18 N., R. 19 W., section 2, into a wash until reaching the turnoff to Alkalai Spring in T. 18 N., R. 19 W., section 10. From this point, foot travel is required. A total of three miles of vehicle access is in the WSA.

Access to the proposed Cool Spring project begins at the vehicle way in T. 19 N., R. 19 W., section 20, SE¼, for one-third mile — until the spring is reached.

It is anticipated that the Columbine Spring area, T. 17 N., R. 19 W., section 6, will be used as a bighorn capture site in the future. Those animals captured would be transplanted to areas outside the WSA. Animals may be captured every year for two to three years in a row within an eight-year period.

An on-foot desert tortoise survey and subsequent monitoring of tortoise populations within the WSA are anticipated.

VEGETATIVE SALES

Mohave Yucca harvest on approximately 2910 acres in the northwestern portion of the area would be denied (See Table 2-5).

The following uses and actions are anticipated in the 24,200 acres returned to other resource uses.

MINERALS ACTIONS

One large open-pit zeolite mine in sections 14, 22 and 23, T. 18 N., R. 20 W., would disturb 600 acres.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource uses or actions are anticipated.

All Wilderness Alternative (Map 2-12)

The *All Wilderness* alternative for the Warm Springs WSA would designate 114,800 acres as wilderness.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

There would be one large underground gold mine in section 30, T. 19 N., R. 19 W., one large open-pit zeolite mine in sections 14, 22 and 23, T. 18 N., R. 20 W., and two small open-pit (disturbing one acre each) and one small underground mine in section 36, T. 19 N., R. 20 W., and section 1, T. 18 N., R. 19 W., G&SRM. About 707 acres and 86 workers would be involved. No new mining access required.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. The livestock and rangeland actions would differ from the *Proposed Action/Partial Wilderness* alternative. Three additional spring developments would be included within the management area. From Caliche Spring, two miles of buried pipeline extend to a service area outside of the WSA. Antelope Spring feeds into a reservoir. It is important to recognize that occasional use of motorized equipment would be required over seven miles of existing vehicle way in order to maintain or reconstruct a total of four livestock waters.

Proposed Range Improvements. The proposed fenceline project would differ from the proposal under the *Proposed Action/Partial Wilderness* alternative. A total of four miles of access for construction of five and one-half miles of fence would be restricted.

RECREATION USE ACTIONS

Wilderness designation would close 114,800 acres to motorized recreation use displacing 600 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The actions planned under *All Wilderness* are the same as under the *Proposed Action/Partial Wilderness*.

VEGETATIVE SALES

Mohave yucca harvest on approximately 2,910 acres (Table 2-5) would be denied.

No other resource actions or uses are anticipated.

Interior valley in eastern portion of Warm Springs WSA cuts into Black Mesa - Warm Springs WSA.

ALL WILDERNESS/NO WILDERNESS ALTERNATIVE
MAP 2-12

WARM SPRINGS 2-28/29

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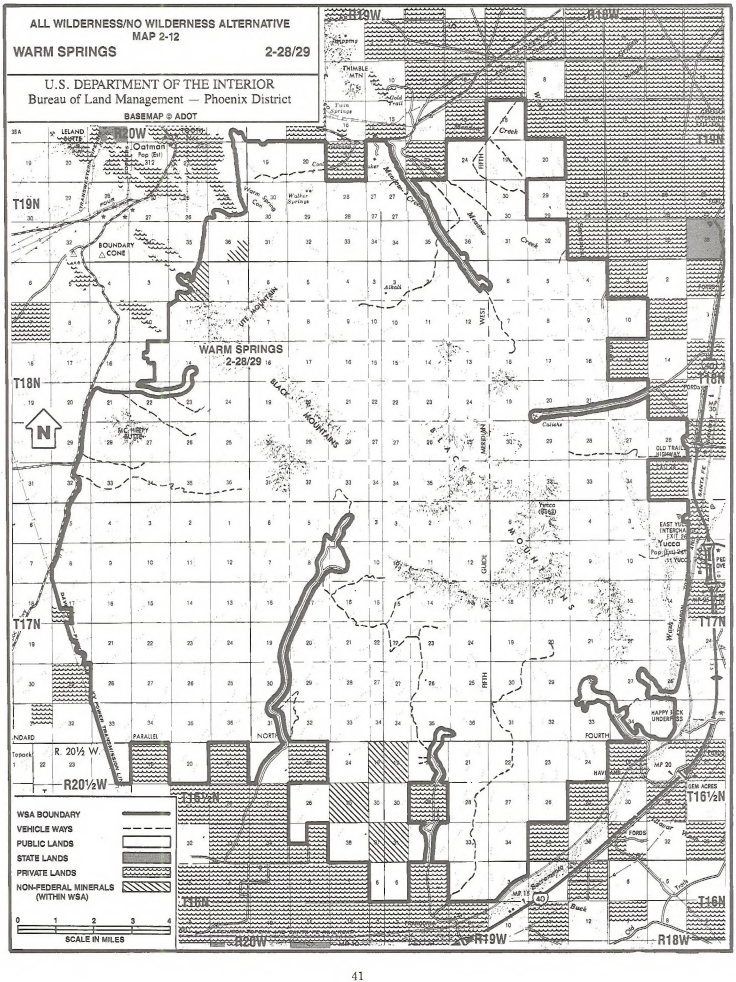

Enhanced Wilderness Alternative (Map 2-13)

The *Enhanced Wilderness* alternative differs from the *Proposed Action/Partial Wilderness* alternative in that 620 acres acquired through exchange in the northeastern portion of the WSA have been included in the 91,220 acres designated wilderness. The other 24,200 acres would be returned to other resource uses.

Under this alternative management actions and uses would be the same as described under the Proposed Action/Partial Wilderness alternative.

No Wilderness Alternative (Map 2-12)

The *No Wilderness* alternative for the Warm Springs WSA would return 114,800 acres to other multiple use management.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Eleven exploration and development projects would result in one large underground gold mine in section 30, T. 19 N., R. 19 W., one large open-pit zeolite mine in sections 14, 22 and 23, T. 18 N., R. 20 W., two medium open-pit gold mines in section 9, T. 17 N., R. 19 W., and section 1, T. 18 N., R. 19 W., one medium open-pit kaolinite mine on private minerals in T. 17 N., R. 19 W., section 35, and two small open-pit (disturbing one acre each) and underground mines in section 36, T. 19 N., R. 20 W., and section 11, T. 18 N., R. 19 W., G&SRM. The mines would disturb 1,602 acres and employ 190 workers. No new mining access required.

RANGELAND MANAGEMENT ACTIONS

Maintenance of Existing Projects. The actions would remain basically the same as under the *Proposed Action/Partial Wilderness* alternative. However, access to range improvements and use of motorized equipment would not be managed under wilderness constraints. A total of four miles of access, precluded from use under wilderness status, would be used in the construction of 5.5 miles of proposed boundary fence. Access and use of motorized equipment to maintain or reconstruct the four water developments over seven miles of existing vehicle way would not be regulated under wilderness management policy.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreational use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

The actions under *No Wilderness* are the same as under the *Proposed Action/Partial Wilderness*.

VEGETATIVE SALES

Approximately 2,910 acres of land in the northeast portion of the unit (Table 2-5) are suitable for Mohave yucca harvest, subject to BLM stipulations. This area would be harvested on a 30-year rotation cycle.

No other resource actions or uses are anticipated.

SOUTH BRADSHAWS EAST (AZ-020-84A) WSA

Proposed Action/No Wilderness Alternative (Map 2-6)

The *Proposed Action/No Wilderness* alternative for the South Bradshaws East WSA would return 640 acres to other multiple management uses.

The following actions and uses are anticipated.

MINERALS ACTIONS

The expected one exploratory program, one small underground mine and up to one-half mile of new road would disturb about six acres. The exploration and mining activity are expected in the SE¼ of the WSA (section 14, T. 9 N., R. 1 E.).

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions or uses are anticipated.

All Wilderness Alternative (Map 2-6)

This alternative would designate 640 acres in the South Bradshaws WSA as wilderness.

Under this alternative the following actions and uses are anticipated.

RECREATION USE ACTIONS

Wilderness designation would close 640 acres to motorized recreation use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions or uses are anticipated.

ENHANCED WILDERNESS MAP 2-13

WARM SPRINGS **2-28/29**

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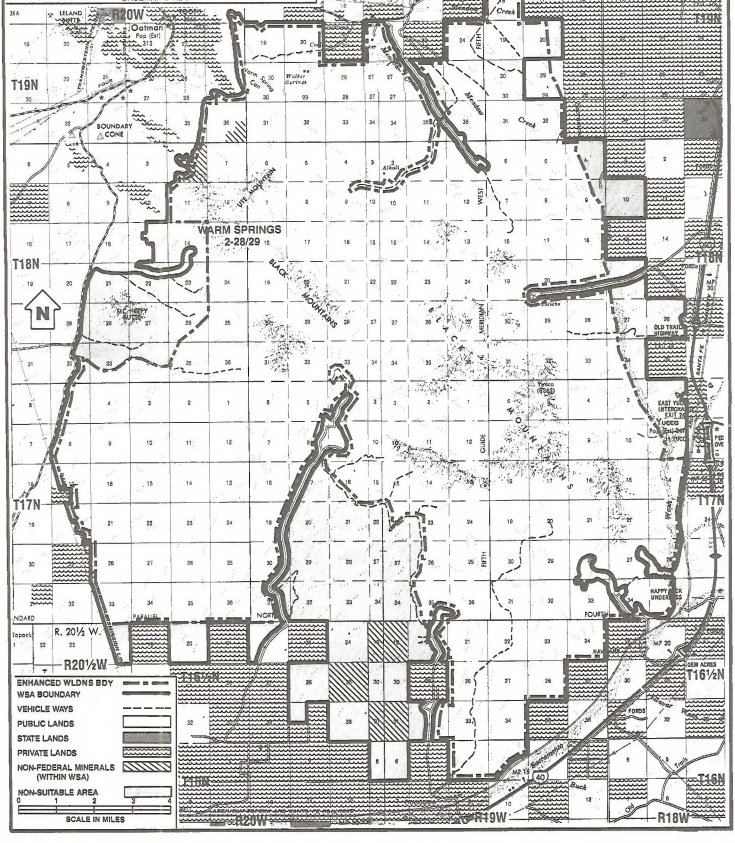

R20W
R19W
R18W
R13W
T19N
T18N
T17N
T16½N
T16N
T15N
WARM SPRINGS
2-28/29
BOUNDARY CONE
BLACK MOUNTAINS
Oatman
Pop (Est) 312
Yucca
Walker Summit
Alum
Mineral
Creek
Wash
FIFTH
WEST
GUIDE
MERIDIAN
NORTH
FOURTH
PARALLEL
OLD TRAIL
HAPPY DEAL UNDERPASS
EAST YUCCA INTERCHANGE
EXIT 35
YUCCA
Fort Mohave Indian Reservation
Bullhead City
Fort Mohave
Davis Dam
Bullhead Trail
Fortuna
Mine
Ford
Ranch
Tom
Wash
Mt Nutt
Mt Wilson
Mt Tipton
Mt Hope
Mt Vernon

SIERRA ESTRELLA WSA
(AZ-020-160)

Proposed Action/All Wilderness (Map 2-14)

The *Proposed Action/All Wilderness* alternatives would designate all 14,830 acres of the Sierra Estrella WSA as wilderness.

The following actions and uses are anticipated.

MINERALS ACTIONS

In T. 3 S., R. 1 E., section 24, one small underground mining operation would be developed, disturbing less than five acres. Access is adequate but would need maintenance.

LAND USE ACTIONS

Designation of the area would require the removal of one temporary right-of-way authorized under the *Interim Management Policy*.

RECREATION USE ACTIONS

Wilderness designation would close 14,830 acres to motorized recreation use displacing 1,200 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Montezuma and Butterfield Tanks would require maintenance and improvement to benefit desert bighorn sheep and other desert wildlife. This would include enlargement of the masonry dams and installation of shades and gabions to increase storage, reduce evaporation and divert silt, respectively. The work would be done in a nonimpairing manner.

No other resource uses or actions are anticipated.

No Wilderness Alternative (Map 2-14)

The *No Wilderness* alternative for the Sierra Estrella WSA would return 14,830 acres to other multiple use management.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

In T. 3 S., R. 1 E., section 24, there are 24 claims that cover the entire section. One small underground mining operation and two exploration areas would be developed with surface disturbance under five acres for each. Access is adequate but upgrading would be necessary. About one-half mile of new road would be constructed.

In T. 3 S., R. 1 E., section 13, 37 mining claims are mostly in the west and north halves of the section. One exploratory operation would cause less than five acres of surface disturbance. Three miles of existing access roads would be upgraded and maintained and one and one-half miles of new road constructed.

In T. 3 S., R. 1 E., section 12, 25 mining claims are mostly in the south and west halves of the section. One small underground mine and two exploratory operations would be developed in the southwest quarter with surface disturbance less than five acres for each operation. Two miles of existing access would be upgraded and maintained and one-half mile of new road constructed.

In T. 3 S., R. 1 E., section 11, 48 mining claims cover the entire section. There would be one small underground mine and one exploratory operation in the west and north halves. The one small mine would disturb five acres. The four miles of existing roads would be upgraded and maintained and two miles of new roads constructed.

In T. 3 S., R. 1 E., section 10, 40 mining claims cover the entire section. One small underground mining operation and two exploratory areas in the southern and western halves of the section would result in maintenance of three miles of existing roads and construction of one mile of new road. The mining operation would disturb five acres of surface.

In T. 2 S., R. 1 E., section 34, there are 10 claims. In the southeastern quarter one exploratory operation, if developed, would disturb one or two acres of surface. One-half mile of existing road would be upgraded with no new access roads necessary.

In T. 2 S., R. 1 E., section 33, the 22 claims would result in one exploration operation that would disturb over two acres in the south half. The access roads would be maintained.

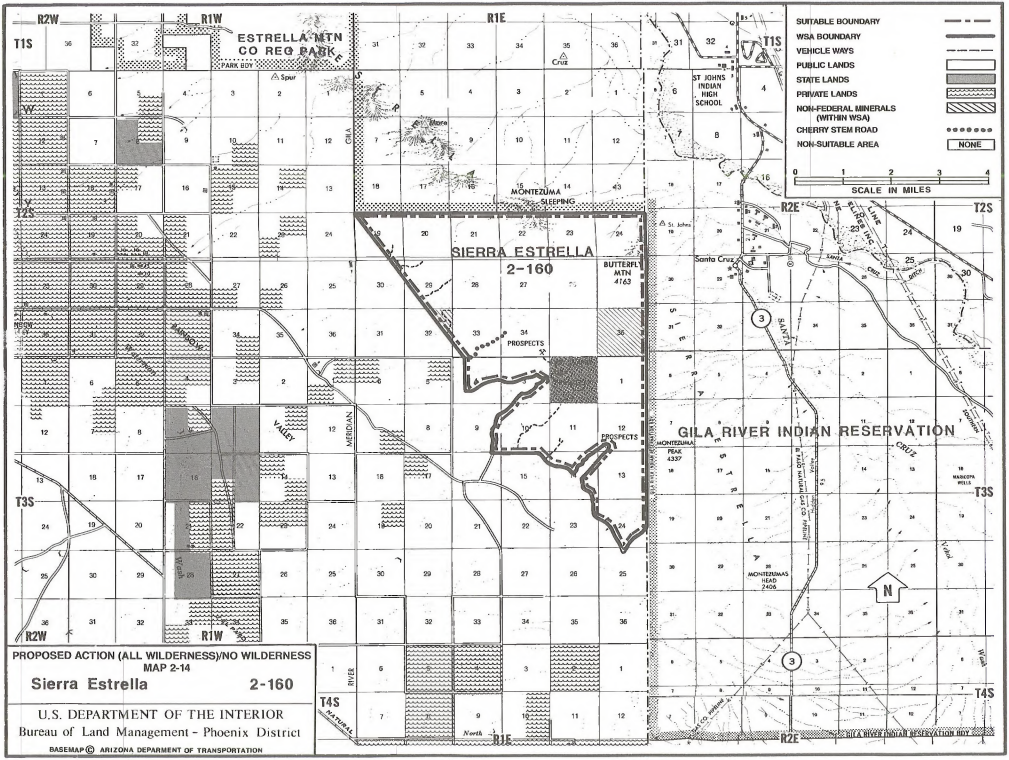
In T. 2 S., R. 1 E., section 28, 11 claims would result in one exploratory operation disturbing less than one acre in the northeast quarter. One mile of upgraded road would provide access.

In T. 2 S., R. 1 E., section 19, seven claims would result in one exploratory operation in the northeast quarter that would disturb less than one acre of surface. Access would be on existing roads.

In T. 2 S., R. 1 E., section 20, eight claims would result in one exploratory operation in the southwest quarter disturbing less than one-half acre. Existing roads would be used.

LAND USE ACTIONS

The one temporary communication site authorized under the *Interim Management Policy* would become permanent. Another six to ten communication sites could be anticipated. Because of the rough terrain there would be no road or powerline anticipated to service the site. The sites would consist of a small low building and a tower for each.



PROPOSED ACTION (ALL WILDERNESS)/NO WILDERNESS
MAP 2-14

Sierra Estrella 2-160

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management - Phoenix District

BASEMAP © ARIZONA DEPARTMENT OF TRANSPORTATION

RECREATION USES

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

Montezuma and Butterfield Tanks will require maintenance and improvement to benefit desert bighorn sheep and other desert wildlife (See Table 2-3). This will include enlargement of the masonry dams and installation of shades and gabions to increase storage, reduce evaporation and divert silt, respectively. This will be done in a nonimpairing manner.

No other resource uses or actions are anticipated.

RAGGED TOP WSA
(AZ-020-197)

Proposed Action/No Wilderness Alternative (Map 2-15)

The *Proposed Action/No Wilderness* alternative for the Ragged Top WSA would return 4,460 acres to other multiple use management uses.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

Expected are two exploration programs, two small underground mines and up to two miles of new or upgraded roads. The roads would disturb four acres and the mines ten acres. Mining interests would be encouraged to minimize damage to the wildlife habitat and other resources. Mining activity would be expected in the southwestern portion of the WSA in the N½ of sections 25 and 26 in T. 11 S., R. 8 E.

RANGELAND MANAGEMENT ACTIONS

No changes in levels of livestock use are proposed for any of the three allotments that overlap this WSA. If monitoring studies data indicate changes or adjustments in livestock use or other multiple uses are needed, a coordinated resource plan may be developed. This plan would be a component of the overall Habitat Management Plan for the Silver Bell planning unit.

No new range improvements are proposed within the WSA boundary. Maintenance of 1.75 miles of fence would continue, using customary methods.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

No new wildlife developments are proposed, but wildlife modifications to 1.75 miles of boundary fence would be part of the habitat management plan for the area.

The existing wildlife water development would continue to be maintained on an as needed basis with access by vehicle, foot or helicopter if necessary.

No other resource actions or uses are anticipated.

All Wilderness Alternative (Map 2-15)

This alternative would designate 4,460 acres of the Ragged Top WSA as wilderness.

Under this alternative the following actions and uses are anticipated.

RANGELAND MANAGEMENT ACTIONS

No changes in levels of livestock use are proposed for any of the three allotments that overlap this WSA. Any future livestock adjustments would be based on monitoring data which indicated availability of additional forage.

No allotment management plans (AMPs) would be developed for any of the allotments.

No new range improvements are proposed and maintenance of 1.75 miles of allotment boundary fence would be accessed by horse.

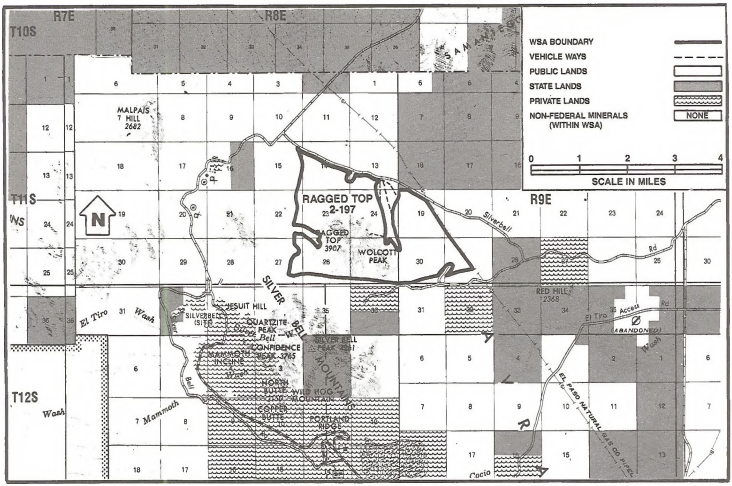
RECREATION USE ACTIONS

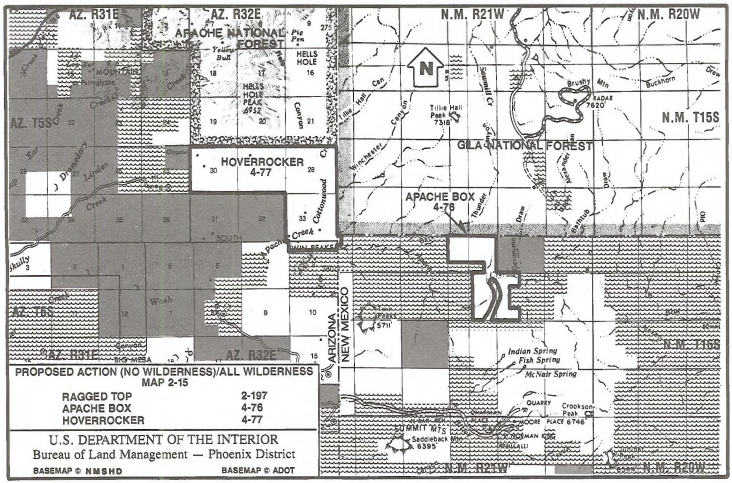
Wilderness designation would close 4,460 acres to motorized recreation use displacing 700 VDY of motorized use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

WILDLIFE MANAGEMENT ACTIONS

No new wildlife developments are proposed within the WSA boundary. The existing wildlife development (an 800-gallon storage tank, trough, rock dam and pipeline) would be maintained once or twice a year as needed. Access would be by foot or helicopter if necessary.

No other resource action or uses are anticipated.





PROPOSED ACTION (NO WILDERNESS)/ALL WILDERNESS
MAP 2-15

RAGGED TOP	2-197
APACHE BOX	4-76
HOVERROCKER	4-77

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APACHE BOX WSA
(AZ-040-76)

Proposed Action/No Wilderness Alternative (Map 2-15)

The *Proposed Action/No Wilderness* alternative for the Apache Box WSA would return 932 acres to other multiple uses.

Under this alternative the following actions and uses are anticipated.

MINERALS ACTIONS

One exploration program would be in the canyon portion of the WSA in an area where previous activity disturbed one acre. Access would be by a one-mile long cherrystemmed road built for the previous exploration activity. Total disturbance would be two acres.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource action or uses are anticipated.

All Wilderness Alternative (Map 2-15)

All of the Apache Box WSA's 932 acres would be designated wilderness — depending on the designation of the Forest Service's contiguous Hell Hole WSA.

Under this alternative the following actions and uses are anticipated.

RECREATION USE ACTIONS

Wilderness designation would close 932 acres to motorized recreation use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions or uses are anticipated.

HOVERROCKER WSA
(AZ-040-77)

Proposed Action/No Wilderness Alternative (Map 2-15)

The *Proposed Action/No Wilderness* alternative for the Hoverrocker WSA would return 2,791 acres to other multiple uses.

Under this alternative the following actions and uses are expected.

RECREATION USE ACTIONS

No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions or uses are anticipated.

All Wilderness Alternative (Map 2-15)

All of the WSA's 2,791 acres would be designated wilderness under the *All Wilderness* alternative. This alternative depends on designation of the Forest Service's contiguous Hell Hole WSA.

Under this alternative the following actions and uses are expected.

RECREATION USE ACTIONS

Wilderness designation would close 2,791 acres to motorized recreation use. No actions are proposed or planned to modify current recreation use or opportunities in this WSA.

No other resource actions or uses are anticipated.

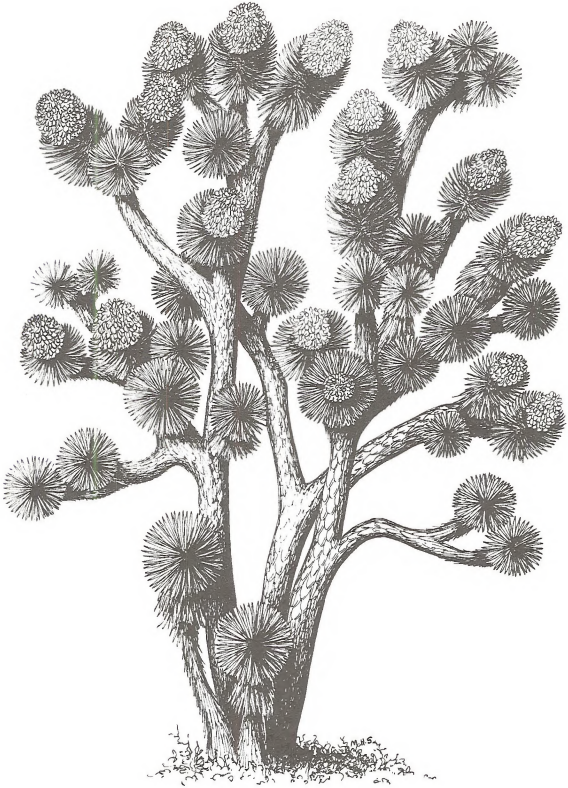


TABLE 2-6
SUMMARY OF IMPACTS
Bureau of Land Management, Arizona

VAN DEEMAN (AZ-020-07) 1,510 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative all wilderness values on 1,510 acres would be adversely impacted by motorized vehicle use, seven mineral exploration programs and five developed mines.	Under this alternative 605 acres (40%) would retain existing naturalness. The perception of naturalness would not be preserved and the quality, solitude and primitive recreation opportunities would be lost over the 1,510 acres (100%) of the WSA due to the development of the two mines in the WSA.
Minerals Development	Under this alternative there would be no impact to the development of the minerals in the WSA.	This alternative would deny seven exploration programs and three mines, but would allow two mines to be developed on claims with valid existing rights.
Recreation Use	Under this alternative all motorized and nonmotorized recreation use would be displaced by mineral development.	Under this alternative nonmotorized recreation use would be displaced due to the development of two large mines on claims with valid existing rights.
Wildlife Values	Under this alternative 1,510 acres of crucial bighorn sheep habitat and 1,510 acres of suitable desert tortoise and Gila monster habitat would be destroyed by mineral development. The Van Deeman Tank would be abandoned and two bighorn sheep would be lost.	This alternative would protect 605 acres (40%) of crucial bighorn sheep, and suitable desert tortoise and Gila monster habitat by denying seven exploration programs and three mine developments. The development of two mines would destroy 905 acres (60%) of the crucial desert bighorn sheep and suitable desert tortoise and Gila monster habitat. The Van Deeman Tank would be abandoned and two bighorn sheep would be lost.
Cultural Resources	Under this alternative the two cultural sites probably in the WSA could be impacted by mineral exploration and development.	Under this alternative the two cultural sites that probably exist in this WSA would be protected because of less mineral development and more monitoring.

MOCKINGBIRD (AZ-020-08) 5,815 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative wilderness values of naturalness, solitude and primitive recreation opportunities would be lost or impaired on 3,000 acres (52%) of the WSA due to mining development activities.	Under this alternative wilderness values of naturalness, solitude and primitive recreation opportunities would be lost or impaired on 3,000 acres (52%) of the WSA due to mining developments.
Minerals Development	Under this alternative there would be no impact to the development of the minerals.	Under this alternative seven exploration programs would be denied but five mines would be developed on claims with valid existing rights.
Recreation Use	Under this alternative all of the nonmotorized VDY would be displaced because of the mining development.	Under this alternative nonmotorized recreation use would be displaced due to the development of the five mines on claims with valid existing rights
Wildlife Values	Under this alternative 910 acres (22.7%) of the crucial bighorn sheep habitat and 910 acres (15.5%) of the suitable desert tortoise and Gila monster habitat would be destroyed due to the development of minerals in the WSA.	This alternative would protect 3,376 acres (84.4%) of the crucial bighorn habitat and 4,892 acres (84.1%) of suitable desert tortoise and Gila monster habitat by denying seven exploration programs. The development of five mines, on claims with valid existing rights, would destroy 624 acres (15.6%) of the crucial bighorn sheep habitat and 923 acres (15.9%) of suitable desert tortoise and Gila monster habitat.
Cultural Resources	Under this alternative the four cultural sites (expected) in the WSA could be impacted by mineral development.	Under this alternative the four cultural sites probably in the WSA would be protected due to less motorized recreation use and more monitoring.

TABLE 2-6 (Condinued)

BLACK MOUNTAINS NORTH (AZ-020-09) 19,900 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS
	(18,400 Acre Designated; 1,500 Acres Released)
Wilderness Values	Under this alternative 17,800 acres (89.4%) would retain existing naturalness, solitude and primitive recreation values. Wilderness values would be eliminated on 2,100 acres (10.6%) of the WSA from mining activities. Unquantified additional impacts could occur on 9,710 acres of nonfederal minerals if developed.
Minerals Development	Under this alternative exploration would be denied on 9,460 acres of federal minerals. Based on geology and scenarios of future mineral developments, it is estimated that mining development would be lost on 557 acres.
Recreation Use	This alternative would cause an increase in nonmotorized use of 250 VDY in the designated, and an increase in motorized use of 150 VDY in the nondesignated part of the WSA.
Wildlife Values	This alternative would provide protection to 12,935 acres of crucial bighorn sheep habitat (including 4,890 acres of lambing grounds), 7,885 acres of suitable peregrine falcon habitat and 18,195 acres of suitable desert tortoise and Gila monster habitat. A total of 835 acres of crucial bighorn sheep, 755 acres of peregrine falcon, and 755 acres of suitable desert tortoise and Gila monster habitat will be destroyed by mineral development.
Cultural Resources	This alternative would protect the four cultural sites probably present in the designated area by preventing mineral exploration, limiting mineral development while increasing monitoring and interpretation. There are no known or projected sites in the area not recommended for wilderness.

IMPACTS ON	ALL WILDERNESS	NO WILDERNESS
Wilderness Values	Under this alternative 17,800 acres (89.4%) would retain the existing naturalness, solitude and primitive recreation values. Wilderness values would be eliminated on 2,100 acres (10.6%) of the WSA from mining activities on federal minerals. Unquantified additional impacts could occur on 9,710 acres of nonfederal minerals if developed.	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 8,400 acres (42.2%) of the WSA due to increased motoized vehicle use and mining development.
Minerals Development	Under this alternative exploration would be denied on 10,190 acres of federal minerals. Based on geology and scenarios of future mineral developments, it is estimated that mineral development would be lost on 557 acres.	Under this alternative there would be no impact to the development of the minerals in the WSA.
Recreation Use	This alternative would cause an increase in nonmotorized recreation use by 250 VDY and displace 200 VDY of VDY motorized recreation use.	Under this alternative the recreation use would increase by 100 VDY, motorized and nonmotorized would increase by 50 each.
Wildlife Values	This alternative would provide protection to 13,695 acres (95.1%) of the crucial bighorn sheep habitat, 7,935 acres (91.8%) of the suitable peregrine falcon habitat and 19,175 acres (96.4%) of suitable desert tortoise and Gila monster habitat. Mineral development and increased human activity would destroy 655 acres (4.9%) of the crucial bighorn sheep habitat, 655 acres (8.2%) of suitable peregrine falcon and 655 acres (3.6%) of suitable desert tortoise and Gila monster habitat.	Under this alternative 917 acres (6.3%) of the crucial bighorn sheep, and 1,212 acres (14.0%) of the suitable peregrine falcon, (6.1%) of the suitable desert tortoise and Gila monster habitat would be destroyed by mining developments and increase visitor use.
Cultural Resources	This alternative would protect the four cultural sites probably present in the WSA by preventing mineral exploration and increasing monitoring and interpretation.	Under this alternative the four cultural sites probably in the WSA could be impacted by mineral development and increased recreation use.

TABLE 2-6 (Continued)

BURNS SPRING (AZ-020-10) 30,600 acres

IMPACTS ON	PROPOSED ACTION/PARTIAL WILDERNESS
	(23,000 Acres Designated; 7,600 Acres Nondesignated)
Wilderness Values	This alternative would retain wilderness values of naturalness, solitude and primitive recreation on 23,900 acres (78.1%) of the WSA. Wilderness values on 1,550 acres (0.5%) would be lost due to mineral development and 6,700 acres (21.9%) would be impaired by mining activities and motorized use. Unquantified additional impacts could occur on 8,320 acres of nonfederal minerals if developed.
Minerals Development	This alternative would close 16,280 acres of federal minerals to entry under the mining laws, but two mines would be developed on mining claims with valid existing rights.
Recreation Use	This alternative would close 23,000 acres to motorized recreation use but motorized use would increase from 100 VDY to 200 VDY in the portion of the WSA returned to other uses. The nonmotorized use would increase from 200 VDY to 450 VDY.
Wildlife Values	This alternative would protect 15,750 acres (92.8%) of the crucial bighorn sheep, 18,850 acres (98.2%) of suitable peregrine falcon, 17,650 acres (91.9%) of suitable desert tortoise and Gila monster habitat.
Cultural Resources	Under this alternative increased monitoring would protect two prehistoric rock shelters, two old mines and a prehistoric campsite, probably present in the WSA, from mineral development and motorized recreation use.

IMPACTS ON	ALL WILDERNESS	NO WILDERNESS
Wilderness Values	This alternative would protect wilderness values of naturalness, solitude and primitive recreation on 24,600 acres (80.4%) of the WSA from mineral exploration and motorized recreation use. Unquantified additional impacts could occur on 8,320 acres of nonfederal minerals if developed.	Under this alternative 12,200 acres (39.9%) of the wilderness values of naturalness, solitude and primitive recreation would be lost or impaired by mineral exploration, mineral development and motorized recreation use.
Minerals Development	Under this alternative 22,280 acres of federal minerals would be withdrawn from mineral entry but five mines would be developed on claims with valid existing rights. Unquantified impacts could take place on the 8,320 acres of nonfederal minerals. Seven mineral exploration programs would be denied.	Under this alternative there would be no impact to the development of the minerals in the WSA.
Recreation Use	This alternative would close 30,600 acres to motorized recreation use displacing 200 VDY of use. The nonmotorized use would increase from 200 VDY to 450 VDY.	Under this alternative recreation use would increase from 300 VDY to 470 VDY. motorized recreation use would increase from 100 VDY to 200 VDY and nonmotorized use would increase from 200 VDY to 270 VDY.
Wildlife Values	This alternative would protect 16,360 acres (96.4%) of crucial bighorn sheep, 18,850 acres (98.1%) of suitable peregrine falcon, and 29,051 acres (94.9%) of suitable desert tortoise and Gila monster habitat from motorized recreation use and seven mineral exploration programs.	Under this alternative 600 acres (3.5%) of crucial bighorn sheep, 350 acres (1.8%) of suitable peregrine falcon, and 1,550 acres (8.1%) of suitable desert tortoise and Gila monster habitat would be destroyed due to mineral exploration, mining development and increased recreation use.
Cultural Resources	Under this alternative increased monitoring would protect two prehistoric rock shelters, two old mines and a prehistoric campsite, probably present in the WSA, from seven exploration programs and motorized recreation use.	Under this alternative the two prehistoric rock shelters, two old mines and a prehistoric campsite, probably present in the WSA, could be damaged and vandalized from mineral exploration, mining developments and increased recreation use.

TABLE 2-6 (Continued)

MOUNT TIPTON (AZ-020-12/42 34,060 acres

IMPACTS ON	PROPOSED ACTION/PARTIAL WILDERNESS
	(28,170 Acres Designated; 5,890 Acres Released)
Wilderness Values	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be retained on 27,920 acres (82%) of the WSA. Wilderness values would be eliminated on 6,140 acres (18%) of the WSA from mining activities. Unquantified additional impacts could occur on 10,500 acres of nonfederal minerals if developed.
Minerals Development	Under this alternative exploration would be denied on 19,250 acres of federal minerals. Based on geology and scenarios of future mineral developments, it is estimated that mining development would be lost on 252 acres.
Recreation Use	This alternative would cause an increase in nonmotorized use of 400 VDY and a decrease in motorized use of 50 VDY in the WSA.
Wildlife Value	This alternative would protect 33,105 acres of wildlife habitat including 27,476 acres of suitable Gila monster and 8,000 acres of peregrine falcon habitat. A total of 955 acres of suitable Gila monster habitat would be destroyed by mineral development.
Vegetation Sales	This alternative would deny the harvest of 280 acres of Mohave Yucca in the WSA.
Cultural Resources	This alternative would protect the rock shelter and prehistoric and historic camps found in the WSA from future vandalism and motorized use because of increased monitoring.

IMPACTS ON	ALL WILDERNESS	NO WILDERNESS
Wilderness Values	Under this alternative 30,220 acres (88.7%) would retain the naturalness, solitude and primitive recreation values in the WSA. Wilderness values would be eliminated on 3,840 acres (11.3%) of the WSA from mining activities, right-of-way construction and range developments. Unquantified additional impacts could occur on 9,710 acres of nonfederal minerals if developed.	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 7,190 acres (21.1%) of the WSA because of mining activities, off-road vehicles (motorized recreation), range developments, Mohave yucca harvest and right-of-way construction.
Minerals Development	Under this alternative exploration would be denied on 23,560 acres of federal minerals. Based on geology and scenarios of future mineral development, it is estimated that mineral development would be denied on 252 acres.	Under this alternative there would be no impact to the development of the minerals in the WSA.
Recreation Use	This alternative would cause an increase in nonmotorized recreation use from 400 VDY to 800 VDY and displace 150 VDY of motorized recreation use.	Under this alternative the recreation use would increase by 50 VDY motorized and 50 VDY nonmotorized.
Wildlife Values	This alternative would provide protection to 33,105 acres (97.2%) of wildlife habitat including 27,469 acres of suitable Gila monster and 8,000 acres of suitable peregrine falcon habitat. Mineral development would destroy 957 acres of suitable Gila monster habitat.	Under this alternative 1,207 acres (4.2%) of the suitable Gila monster habitat would be destroyed by mineral development.
Vegetation Sales	This alternative would deny the harvest of 280 acres of Mohave yucca in the WSA.	Under this alternative there would be no adverse impact to the sale of Mohave yucca.
Cultural Resources	This alternative would protect the rock shelter and prehistoric and historic camps found in the WSA from future vandalism and motorized use because of increased monitoring.	Under this alternative the rock shelter and prehistoric and historic camps found in the WSA could be impacted by mineral development and increased recreation use.

TABLE 2-6 (Continued)

GRAPEVINE WASH (AZ-020-14) 2,200 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 2,200 acres (100%) due to mining development.	This alternative would retain the wilderness values of naturalness, solitude and primitive recreation by precluding one exploration program and the development of one mine.
Minerals Development	Under this alternative there would be no impact to the development of the minerals in the WSA.	This alternative would deny one exploration program and one mine in the WSA.
Recreation Use	Under this alternative the opportunities for recreation use would not change from the present.	Under this alternative the nonmotorized recreation use would increase from 10 VDY to 15 VDY due to the denial of mineral development activities.
Wildlife Values	Under this alternative 301 acres (13.7%) of the crucial bighorn sheep and suitable Gila monster habitat would be destroyed by mining developments.	This alternative would protect 2,200 acres (100%) of crucial bighorn sheep and suitable Gila monster habitat from mineral development.
Cultural Resources	Under this alternative the two known roasting pits, of *National Register* quality, could be impacted by mining development activities.	This alternative would protect the two roasting pits (*National Register* quality) by denying mineral development activities and by increased monitoring.

GRAND WASH CLIFFS (AZ-020-15) 12,176 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 3,636 acres (29.9%) of the WSA due to mineral development, motorized vehicle use and range and wildlife water development.	This alternative would protect the wilderness values of naturalness, solitude and primitive recreation on 10,976 acres (90.1%) of the WSA from increased motorized recreation use, but would allow the development of one mine on claims with valid existing rights and a range water development.
Minerals Development	Under this alternative there would be no impact to the development of the minerals in the WSA.	This alternative would deny four mining exploration programs but would allow the development of a mine on claims with valid existing rights.
Recreation Use	Under this alternative the opportunities for recreation use would not change.	Under this alternative the nonmotorized recreation use would increase from 30 VDY to 80 VDY due to the loss of 120 VDY of motorized recreation use and the denial of four mineral exploration programs.
Wildlife Values	Under this alternative 51 acres (0.4%) of the suitable Gila monster habitat and 51 acres (1.3%) of suitable peregrin falcon habitat would be destroyed by mineral development.	This alternative would protect 12,125 acres (99.6%) of suitable Gila monster and 4,429 acres (98.8%) of the suitable peregrine falcon habitat from increased motorized recreation use.
Cultural Resouces	Under this alternative the two roasting pits, two prehistoric campsites and a prehistoric rock shelter would be subject to vandalism and damage from mineral development and increased motorized recreation use.	This alternative would protect the two roasting pits, two prehistoric campsites and a prehistoric rock shelter from increased motorized recreation use and by increased monitoring.

TABLE 2-6 (Continued)

MOUNT DAVIS (AZ-020-21) 2,560 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 1,280 acres (50%) of the WSA from increased motorized recreation use and mineral development.	This alternative would protect wilderness values of naturalness, solitude and primitive recreation on 1,920 acres (75%) of the WSA from motorized recreation use.
Minerals Development	Under this alternative there would be no impact to the development of the minerals in the WSA.	This alternative would deny two mineral exploration programs but would allow a mine on claims with valid existing rights.
Recreation Use	Under this alternative motorized recreation use would increase due to new roads built for the mining operations. Nonmotorized use would decrease due to mining development and increase motorized use in Section 30.	Under this alternative the opportunities for recreation use would not change.
Wildlife Values	Under this alternative 303 acres (12.3%) of crucial bighorn sheep and 303 acres (11.8%) of suitable desert tortoise and Gila monster habitat would be destroyed by mineral development and increased motorized use.	Under this alternative would protect 2,157 acres (91.7%) of crucial bighorn sheep and 2,257 acres (88.2%) of suitable desert tortoise and peregrine falcon habitat from motorized recreation use.
Cultural Resources	Under this alternative two prehistoric campsites and a prehistoric rock shelter, probably in the WSA, could be impacted by mineral development and increased motorized use.	This alternative would protect two prehistoric campsites and a prehistoric rock shelter from increased motorized recreation use and by monitoring.

TABLE 2-6 (Continued)

MOUNT NUTT (AZ-020-24) 29,190 acres

IMPACTS ON	PROPOSED ACTION/PARTIAL WILDERNESS
	(27,210 Acres Designated; 1980 Acres Released)
Wilderness Values	Under this alternative 25,340 acres (86.8%) would retain existing naturalness, solitude, and primitive recreation values. Wilderness values would be eliminated on 3,850 acres (13.2%) of the WSA from mining activities and range improvements construction. Unquantified additional impacts could occur on 4,161 acres of nonfederal minerals if developed.
Minerals Development	Under this alternative exploration would be denied on 23,049 acres of federal minerals. Based on geology and scenarios of future mineral developments, it is estimated that mining development would be lost on 401 acres.
Recreation Use	This alternative would cause an increase in nonmotorized recreation use of 1,600 VDY and a decrease of 1,100 VDY of motorized recreation use.
Wildlife Values	This alternative would provide protection to 21,690 acres (94.4%) of crucial bighorn sheep (including 8,000 of lambing grounds), 24,150 acres (93.2%) of suitable peregrine falcon, and 28,160 acres (96.5%) of suitable desert tortoise and Gila monster habitat. A total of 1,008 acres of crucial bighorn sheep, suitable desert tortise and Gila monster, and 980 acres of suitable peregrine falcon habitat would be destroyed by mining developments and range improvement construction.
Vegetative Sales	Under this alternative 630 acres of Mohave yucca would be protected from harvest.
Cultural Resources	This alternative would protect the Bighorn Cave, a rock shelter and pictograph and petroglyph sites by increased monitoring.

IMPACTS ON	ALL WILDERNESS	NO WILDERNESS
Wilderness Values	Under this alternative 25,690 acres (88.0%) would retain existing naturalness, solitude, and primitive recreation values. Wilderness values would be eliminated on 3,500 acres (12.0%) of the WSA from mining development and range improvement construction. Unquantified additional impacts could occur on 4,161 acres of nonfederal minerals if developed.	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 9,020 acres (30.9%) of the WSA due to increased motorized recreation use, Mohave yucca harvest and mining developments and exploration.
Minerals Development	Under this alternative exploration would be denied on 25,029 acres of federal minerals. Based on geology and scenarios of future mineral developments, it is estimated that mining development would be lost on 451 acres.	Under this alternative there would be no impact to the development of the minerals in the WSA.
Recreation Use	This alternative would cause an increase in nonmotorized recreation use of 1,000 VDY and a decrease of 1,200 VDY of motorized recreation use.	Under this alternative the motorized recreation use would increase by 400 VDY and nonmotorized recreation use by 400 VDY.
Wildlife Values	This alternative would protect 22,202 acres (96.7%) of crucial bighorn sheep (including 8,000 acres of lambing ground), 25,162 acres (96.3%) of suitable peregrine falcon and 28,232 acres (95.2%) of suitable desert tortoise and Gila monster habitat. Mining development and range improvement construction would destroy 958 acres of crucial bighorn sheep, suitable peregrine falcon, and suitable desert tortise and Gila monster habitat.	Under this alternative 1,409 acres (6.1%) of the crucial bighorn sheep, 960 acres (3.7%) of the suitable peregrine falcon, and 1,409 acres (4.8%) of the suitable desert tortoise and Gila monster habitat would be destroyed by mining developments.
Vegetative Sales	Under this alternative 630 acres of Mohave yucca would be protected from harvest.	Under this alternative 630 acres of Mohave yucca would be harvested.
Cultural Resources	Under this alternative the impacts to cultural resources would be the same as under the Proposed Action/Partial Wilderness.	Under this alternative the Bighorn Cave, rock shelter, and pictograph and petroglyph sites could be impacted by mineral development and increased recreation use.

ENHANCED WILDERNESS

(27,860 Acres Designated; 1,980 Acres Released)

The impacts analyzed would be the same as those described under under the *Proposed Action/Partial Wilderness*.

TABLE 2-6 (Continued)

WARM SPRINGS (AZ-020-28/29) 114,800 acres

IMPACTS ON	PROPOSED ACTION/PARTIAL WILDERNESS
	(90,600 Acres Designated; 24,200 Acres Released)
Wilderness Values	Under this alternative 107,560 acres (93.7%) would retain existing naturalness, solitude and primitive recreation values. Wilderness values on 7,240 acres (6.3%) of the WSA would be eliminated by mining developments, range improvement construction and motorized recreation use. Unquantified additional impacts could occur on 16,214 acres of nonfederal minerals if developed.
Minerals Development	Under this alternative exploration would be denied on 76,686 acres of federal minerals. Based on geology and scenarios of future mineral development, it is estimated that mining development would be lost on 847 acres.
Recreation Use	This alternative would cause an increase in nonmotorized recreation use of 450 VDY and a decrease in motorized recreation use of 150 UDY.
Wildlife Values	This alternative would provide protection to 75,290 acres (98.0%) of crucial bighorn sheep, 5,120 acres (100%) of suitable peregrine falcon and 113,290 acres (98.6%) of suitable desert tortoise and Gila monster habitat. A total of 1,510 acres of crucial bighorn sheep and suitable desert tortoise and Gila monster habitat would be destroyed by mining developments, range improvement construction and motorized vehicle use.
Vegetative Sales	Under this alternative 2,910 acres of Mohave yucca would not be harvested.
Cultural Resources	This alternative would protect the temporary camp and petroglyph sites by increased monitoring.

IMPACTS ON	ALL WILDERNESS	NO WILDERNESS
Wilderness Values	Under this alternative 109,560 acres (95.4%) would retain existing naturalness, solitude and primitive recreation values. Wilderness values would be eliminated on 5,240 acres (4.6%) of the WSA from mining developments and range improvement construction. Unquantified additional impacts could occur on 16,214 acres of nonfederal minerals if developed.	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 25,740 acres (22.4%) of the WSA due to mineral development and exploration, increased motorized recreation use, range improvement construction and Mohave yucca harvest.
Minerals Development	Under this alternative exploration would be denied on 98,586 acres of federal minerals. Based on geology and scenarios of future mineral developments, it is estimated that mining development would be lost on 895 acres.	Under this alternative there would be no impact to the development of minerals in the WSA.
Recreation Use	This alternative would cause an increase in nonmotorized recreation use of 450 VDY and a decrease of 600 VDY of motorized recreation use.	Under this alternative the motorized recreation use would be increased by 300 VDY and nonmotorized recreation use by 150 VDY.
Wildlife Values	This alternative would protect 76,093 acres (99.1%) of crucial bighorn sheep, 5,120 acres (100%) of suitable peregrine falcon, and 114,093 acres (99.4%) of suitable desert tortoise and Gila monster habitat. Mining development would destroy 707 acres of crucial bighorn sheep, and suitable desert tortoise and Gila monster habitat.	Under this alternative 1,602 acres (2.1%) of the crucial bighorn sheep, and 1,602 acres (1.4%) of suitable desert tortoise and Gila monster habitat would be destroyed by mining development and exploration.
Vegetation Sales	Under this alternative 2,910 acres of Mohave yucca would not be harvested.	Under this alternative 2,910 acres of Mohave yucca would be harvested.
Cultural Resources	This alternative would protect the temporary camp and petroglyph sites by increased monitoring.	Under this alternative the temporary camp and petroglyph sites could be impacted by mining development and exploration and increased recreation use.

ENHANCED WILDERNESS

91,220 Acres Designated; 24,200 Acres Released)

The impacts analyzed would be the same as those described under the *Proposed Action/Partial Wilderness*.

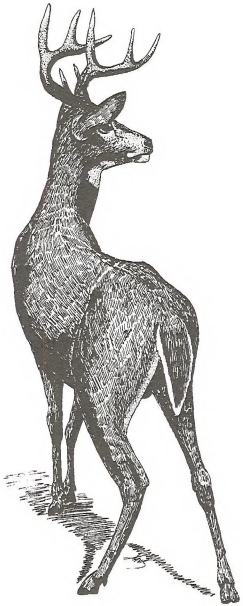


TABLE 2-6 (Continued)

SOUTH BRADSHAWS EAST (AZ-020-84A) 640 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative the wilderness values of naturalness, solitude and primitive recreation would be impaired on 640 acres (100%) of the WSA by mineral development and increased motorized use.	This alternative would protect 640 acres (100%) of the WSA by precluding mineral development and motorized use.
Mineral Development	Under this alternative there would be no impact to the development of the minerals in the WSA.	Under this alternative one exploration program and one mine development would be denied.
Recreation Uses	Under this alternative recreation use would remain at 100 VDY but 25 VDY would be motorized because of the access developed for the mineral development.	Under this alternative the nonmotorized recreation use would increase by 150 VDY.
Wildlife Values	Under this alternative six acres (0.9%) of the chaparral habitat would be lost to mineral development.	This alternative would prevent mineral development thus six acres (0.9%) of the chaparrel habitat in the WSA would not be destroyed.
Cultural Values	Under this alternative the one cultural site, probably in the WSA, could be changed from mineral development, vandalism and erosion.	This alternative would protect the cultural site, probably in the WSA, from mining development and exploration. Vandalism would be reduced due to increased monitoring.

SIERRA ESTRELLA (AZ-020-160) 14,830 acres

IMPACTS ON	PROPOSED ACTION/ALL WILDERNESS	NO WILDERNESS
Wilderness Values	This alternative would retain the wilderness values of naturalness, solitude and primitive recreation on 14,130 acres (95.3%) of the WSA by denying 15 exploration programs and three small mines.	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 4,300 acres (29.0%) of the WSA due to mineral exploration and development, 15 exploration programs and five mines.
Mineral Resources	This alternative would deny 15 exploration programs and three small mines by closing 14,830 acres of federal minerals to entry. One small mine would be developed on claims with valid existing rights.	Under this alternative there would be no impact to the development of the minerals in the WSA.
Recreation Uses	Under this alternative nonmotorized recreation use would increase from 700 VDY to 1,000 VDY and 1,500 VDY of motorized use would be displaced.	Under this alternative recreation use would increase by 300 VDY of motorized use and nonmotorized use would decrease by 200 VDY due to mining exploration and development.
Wildlife Values	This alternative would protect 9,700 acres (98.7%) of the crucial bighorn sheep and 12,100 acres (98.5%) of important desert tortoise habitat by denying 15 exploration programs and three small mines.	Under this alternative 200 acres (2.5%) crucial bighorn sheep and 250 acres (2.0%) important desert tortoise habitat would be destroyed due to mining exploration and development. This would cause a loss of one bighorn sheep and eight desert tortoise.
Cultural Resources	This alternative would protect the *National Register* quality site by denying mineral exploration and development and because of increased monitoring.	Under this alternative there would be increased chances for vandalism of the *National Register* quality site in the WSA due to increased motorized use and mining exploration and development.
Land Uses	Under this alternative no new communication sites would be allowed and the existing site would be removed.	Under this alternative the existing communication site would remain and six to ten new sites would be developed.

TABLE 2-6 (Continued)

RAGGED TOP (AZ-020-197) 4,460 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 750 acres (16.8%) of the WSA due to mining development and increased motorized recreation use.	This alternative would maintain the wilderness values of naturalness, solitude and primitive recreation on all 4,460 acres (100%) of the WSA due to precluding mining and motorized use.
Mineral Development	Under this alternative there would be no impact to the development of the minerals in the WSA.	This alternative would deny two exploration programs and two small mines in the WSA.
Recreation Uses	Under this alternative motorized recreation use would increase from 700 VDY to 1,250 VDY and nonmotorized would decrease from 700 VDY to 500 VDY. The increase in motorized use is due to new mining roads and increase population in nearby cities.	Under this alternative 1,250 VDY of motorized use would be displaced and nonmotorized use would increase from 700 VDY to 1,750 VDY due to no motorized use and population increase in nearby cities.
Wildlife Values	Under this alternative 600 acres (16.0%) of the crucial bighorn sheep habitat would be avoided due to mining activities and increased motorized use, and 14 acres (0.4%) of the crucial bighorn sheep and important desert tortoise habitat would be destroyed by mining development.	This alternative would protect 3,780 acres (100%) of the crucial desert bighorn sheep and 4,460 acres (100%) of the important desert tortoise habitat from mining activities and motorized use.
Cultural Values	Under this alternative the *National Register* quality site, probably in the WSA, would be damaged or vandalized due to mining activities and increased and increased motorized use.	This alternative would protect the probable *National Register* quality site from mining activities and motorized recreation use.

APACHE BOX (AZ-040-76) 932 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	Under this alternative wilderness values of naturalness, solitude and primitive recreation would be lost or impaired on 100 acres (10.7%) of the WSA due to mining development and associated motorized vehicle use.	Under this alternative the wilderness values of naturalness, solitude and primitive recreation would be retained on the entire WSA.
Minerals Development	Under this alternative there would be no impact to the development of the minerals in the WSA.	This alternative would deny exploration and the development of one mine in the WSA.
Recreation Use	Under this alternative the recreation use would increase by 10 VDY of nonmotorized vehicle use.	Under this alternative the recreation use would increase from 50 to 150 VDY of nonmotorized recreation use.
Cultural Resources	Under this alternative the two cultural and two historic sites recorded in the WSA could be impacted by increased visitor use and mineral development.	Under this alternative the two cultural and two historic sites recorded in the WSA would be protected due to increased monitoring.

HOVERROCKER (AZ-040-77) 2,791 acres

IMPACTS ON	PROPOSED ACTION/NO WILDERNESS	ALL WILDERNESS
Wilderness Values	This alternative would not impact wilderness values the wilderness, solitude and primitive recreation across the entire WSA.	Wilderness designation under this alternative would maintain
Recreation Use	Opportunities for recreation use would not change under this alternative.	This alternative would enhance opportunities for nonmotorized recreation use on 2,791 acres.
Cultural Resources	This alternative could result in adverse impacts from vandalism.	Under this alternative the four prehistoric and two historic sites recorded in the WSA would be protected due to increased monitoring.

Source: Chapter 4 of this document.

Chapter 3

AFFECTED ENVIRONMENT

CHAPTER 3

AFFECTED ENVIRONMENT

Introduction

Chapter 3 describes those resources that might be impacted by implementing the *Proposed Action* or the alternatives. Descriptions are only as detailed as needed for the reader to understand the effects of implementing the *Proposed Action* or the alternatives. Where impacts to resources would be slight or nonexistent, descriptions are brief or are omitted.

More detailed descriptions of the resources in the EIS area are in the planning documents for the areas. Copies of these documents may be reviewed in the Phoenix and Safford District offices and in the Kingman Resource Area office.

VAN DEEMAN
(AZ-020-07) 1,510 Acres

Wilderness Values

Location and Boundaries. The WSA is adjacent to the Lake Mead National Recreation Area, about 20 miles southeast of Hoover Dam, and bounded by roads to the north, east and south, and the National Recreation Area (NRA) to the west. Access is via maintained gravel roads off route 93 to the east. The Van Deeman WSA is also contiguous with Unit C, a 15,145 acre area that has been considered as a potential wilderness addition to the Lake Mead National Recreation Area (*Lake Mead Preliminary Wilderness Proposal*, USDI, National Park Service, January 1979, and *Draft Environmental Impact Statement*, National Park Service/LMNRA, April 1985).

Naturalness. The WSA is bisected by the Black Mountains, which run through the unit from north to south. The east portion of the Blacks within the WSA is gently sloping bajada, while the west slope is relatively precipitous and is cut by a number of washes. Elevations range from 3,324 feet at the crest of the Blacks to 2,320 feet in the southwest corner of the WSA. The WSA's vegetation is Mohave desertscrub characterized by creosote, white bursage, Mohave yucca, wolfberry, buckwheat and ephedra. The WSA covers the precipitous west slope of the Blacks and some of the rolling hills and dissected plain to the west. Though less than 5,000 acres in size, the Van Deeman WSA meets the size criteria because it is contiguous with lands managed by another agency which have been formally determined to have potential wilderness values (NPS, Lake Mead National Recreation Area).

There are a few human imprints within the WSA. A vehicle way parallels the southern boundary for approximately one-half mile. Wildlife water developments (two separate masonry dam/pothole catchments) are designed to blend into their surroundings. Both the vehicle way and the water catchments are substantially unnoticeable and do not detract from the apparent naturalness of the unit. Recent mining activity in the WSA involved exploratory trenching within Horseshoe Canyon in the WSA's central portion and an access trail through the southern and western portions of the WSA. This activity was short-term and has been reclaimed, but is still visible. The access trail has naturally rehabilitated to a point where it is largely unnoticeable.

Solitude. The WSA does contain some opportunities for solitude. The complex topography of the west slope of the Blacks provides screening from the sights and sounds of others within the area, and there are numerous secluded places. These opportunities could not be considered outstanding however because of the small size of the WSA (roughly one mile in width and three miles in length), but they are outstanding in conjunction with the contiguous 15,145 acre National Park Service potential wilderness addition.

Primitive and Unconfined Recreation. Opportunities for primitive recreation within the Van Deeman WSA include hiking, photography and sightseeing for zoological and geological features. The mosaic of colors and shapes in the volcanic hills along this west slope of the Blacks provides opportunities for viewing and photography, and visitors have the chance of viewing bighorn sheep and other wildlife. These opportunities are considered outstanding but only in conjunction with the contiguous Park Service potential wilderness addition to the west.

Special Features. Three wildlife species in the WSA are listed as Threatened and Unique Wildlife of Arizona. The desert tortoise and bighorn sheep are species whose status in Arizona may be in jeopardy in the foreseeable future. The Gila monster is a Federal Candidate Category 2 Species.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, 139 active placer and lode mining claims effectively covered the entire WSA. Historical mining and active exploration exists within the 1,550 acres of this WSA. The Bureau was informed of a pending mining plan of operations for drilling to be filed by Fischer-Watt for the Horseshoe Canyon Area centrally located in the WSA. All current drilling is concentrated adjacent to the south and southeast boundaries of the WSA.

Mining districts extending into the WSA have probably produced gold and silver from quartz veins, and recent studies have

disclosed a mineralized zone associated with the foot wall of a detachment fault coincidental with the Tertiary volcanic and Precambrian granite boundary. Various types of faults, including detachment faults, and quartz veins comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south.

The entire WSA has high potential for gold and silver mineral development. See Map 3-1 and Table 3-1 for high and moderate mineral potential.

The Van Deeman WSA has a low potential for oil and gas and for geothermal. There are no known leasable minerals in the WSA.

RECREATION USES

This small WSA is remote from population centers and has few natural amenities that would attract users seeking primitive and unconfined (nonmotorized) types of recreational pursuits. Several larger, topographically complex and accessible areas likely to attract the available pool of both nonmotorized and motorized users lie to the north and south of the unit in the Black Mountains. The about one-half mile long vehicle way receives only sporadic use. Motorized and nonmotorized use is about 20 VDY for each.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type throughout the unit. This area supports approximately 230 vertebrate species of which 19 are special-status species (Table 3-2). See the Black Mountains URA for detailed species lists and life history information (BLM 1977).

This area is part of the range of the Black Mountains desert bighorn sheep population and is contiguous to the Lake Mead National Recreation area which supports high densities of sheep. This WSA contains 1,510 acres of crucial bighorn sheep habitat (Table 3-3 and Map 3-2), with up to two sheep within this WSA.

Suitable habitat for the desert tortoise and Gila monster and for Gilbert's skink in dry and wet canyons with turbinella oak is found throughout the unit. Ferruginous and Swainson's hawks are expected along the eastern fringes of the WSA coming in from nearby Sacramento Valley. Crucial habitats or population numbers for these five species are unknown. Population numbers and ranges of the 13 other special-status species are not known.

CULTURAL RESOURCES

Although no sites are known in this WSA, this is likely a result of the low level of inventory that has been completed. Areas adjacent to the WSA suggest that at least two sites are present that are potentially eligible for the *National Register of Historic Places*. These sites are probably a rock shelter with prehistoric material and at least one old mine.

LAND USES

The WSA has 1,510 acres of public land with no nonfederal holdings. The western boundary of the unit is formed by the Lake Mead National Recreation Area.

VEGETATION

The vegetation is characteristic of the creosote bush-yucca association (Brown et al. 1979) of the Mohave desertscrub formation. The WSA has had no formal botanical inventories but does have suitable habitat for desert cassia and horsebrush (Table 3-4).

MOCKINGBIRD WSA
(AZ-020-08) 5,815 acres

WILDERNESS VALUES

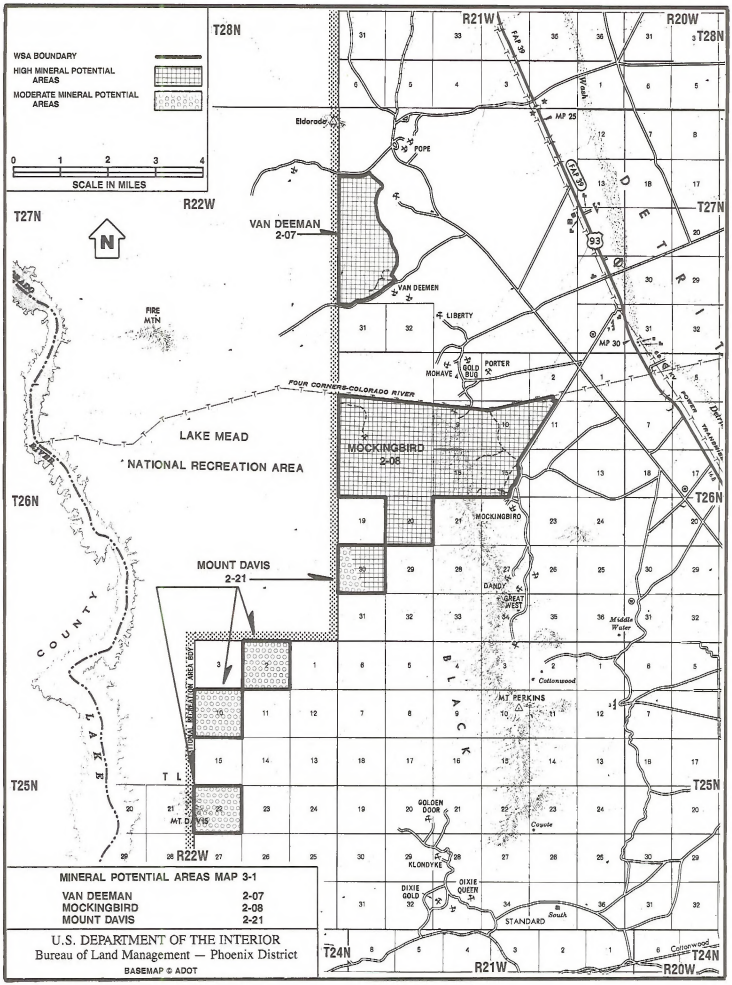
Location and Boundaries. The WSA is adjacent to the Lake Mead National Recreation Area, approximately 25 miles southeast of Hoover Dam.

The WSA is bounded by the Four Corners-El Dorado 500 kV power transmission line to the north, roads to the east, private and state land to the south and the National Recreation Area (NRA) to the west. Access is via gravel roads off route 93 to the east. The WSA is contiguous with Unit 5 (Black Mountains) of the Lake Mead National Recreation Area (*Draft Environmental Impact Statement*, National Park Service, April 1985).

Naturalness. The Mockingbird WSA is crosscut by the Black Mountains which run north to south through the unit. The east slope of the Blacks within the WSA is gently sloping bajada. The majority of the unit is along the west slope of the Black Mountains—rolling hills cut by numerous washes. Elevations range from 3,582 feet at the crest of the Blacks to 2,160 feet in the southwest corner of the unit. Vegetation is sparse Mohave scrub. The WSA is predominantly natural with human imprints largely unnoticeable. The area appears to be affected primarily by the forces of nature.

The nine vehicle ways (totaling four miles) are indistinct and unnoticeable for the most part and have very little impact on the apparent naturalness of the area. Six of the vehicle ways access prospects (trenches, pits or shafts) in the eastern half of the unit.

Another vehicle way accesses a series of mining scrapes, shafts and an old mill site in the northwest corner of the WSA. Three historic prospects (hand dug trenches) have no vehicular access.



MINERAL POTENTIAL AREAS MAP 3-1	
VAN DEEMAN	2-07
MOCKINGBIRD	2-08
MOUNT DAVIS	2-21

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District

BASEMAP © ADOT

TABLE 3-1
MINERAL POTENTIAL
Bureau of Land Management, Arizona

WSA	ALTERNATIVE	Designated Acres		Nondesignated Acres	
		Mineral Acres		Mineral Acres	
		High Potential	Moderate Potential	High Potential	Moderate Potential
Van Deeman	Proposed Action (No Wilderness)	0	0	1,510	0
(AZ-020-07)	All Wilderness	1,510	0	0	0
Mockingbird	Proposed Action (No Wilderness)	0	0	5,595	220
(AZ-020-08)	All Wilderness	5,595	220	0	0
Black Mountains	Proposed Action (Partial Wilderness)	18,162	238	1,500	0
North	All Wilderness	19,662	238	0	0
(AZ-020-08)	No Wilderness	0	0	19,662	238
Burns Spring	Proposed Action (Partial Wilderness)	8,000	14,130	5,440	3,030
(AZ-020-10)	All Wilderness	13,440	17,160	0	0
	No Wilderness	0	0	13,440	17,160
Mount Tipton	Proposed Action (Partial Wilderness)	3,520	24,650	3,200	2,690
(AZ-020-12/42)	All Wilderness	6,720	27,340	0	0
	No Wilderness	0	0	6,720	27,340
Grapevine Wash	Proposed Action (No Wilderness)	0	0	640	1,560
(AZ-020-14)	All Wilderness	640	1,560	0	0
Grand Wash Cliffs	Proposed Action (No Wilderness)	0	0	11,536	640
(AZ-020-15)	All Wilderness	11,536	640	0	0
Mount Davis	Proposed Action (No Wilderness)	0	0	1,920	640
(AZ-020-21)	All Wilderness	1,920	640	0	0
Mount Nutt	Proposed Action (Partial Wilderness)	12,740	14,470	1,980	0
(AZ-020-24)	All Wilderness	14,263	14,470	0	0
	Enhanced Wilderness	12,660	15,200	1,980	0
	No Wilderness	0	0	14,263	14,470
Warm Springs	Proposed Action (Partial Wilderness)	25,300	65,300	6,700	17,500
(AZ-020-28/29)	All Wilderness	32,000	82,800	0	0
	Enhanced Wilderness	25,300	65,940	6,700	17,440
	No Wilderness	0	0	32,000	82,800
South Bradshaws East	Proposed Action (No Wilderness)	0	0	0	640
(AZ-020-84A)	All Wilderness	0	640	0	0
Sierra Estrella	Proposed Action (All Wilderness)	3,210	4,030	0	0
(AZ-020-160)	No Wilderness	0	0	3,000	3,650
Ragged Top	Proposed Action (No Wilderness)	0	0	0	4,460
(AZ-020-197)	All Wilderness	0	4,460	0	0
Apache Box	Proposed Action (No Wilderness)	0	0	0	932
(AZ-040-76)	All Wilderness	0	932	0	0
Hoverrocker	Proposed Action (No Wilderness)	0	0	0	2,791
(AZ-040-77)	All Wilderness	0	2,791	0	0

Source: Phoenix District and Safford District Files.

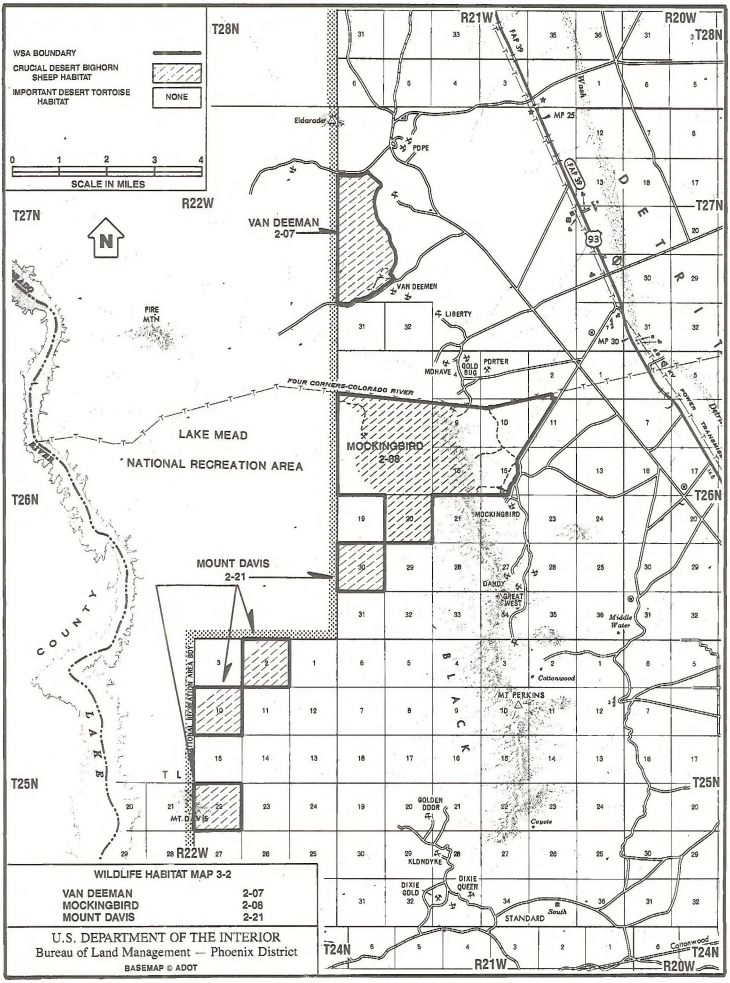

WSA BOUNDARY
CRUCIAL DESERT BIGHORN SHEEP HABITAT
IMPORTANT DESERT TORTOISE HABITAT
NONE
0 1 2 3 4
SCALE IN MILES
N
T28N
R21W
R20W
T27N
R22W
VAN DEEMAN 2-07
MOCKINGBIRD 2-08
MOUNT DAVIS 2-21
Eldorado
POPE
MP 25
MP 30
VAN DEEMEN
LIBERTY
MOHAVE
GOLD BUG
PORTER
FIRE MTN
FOUR CORNERS-COLORADO RIVER
LAKE MEAD
NATIONAL RECREATION AREA
MOCKINGBIRD
GANDY
GREAT WEST
Middle Water
Cottonwood
MT PERKINS
GOLDEN DOOR
Coyote
KLONDYKE
DIXIE GOLD
DIXIE QUEEN
STANDARD
South
Cottonwood
T26N
T25N
T24N
COUNTY
LAKE
BLACK
MOUNT DAVIS WILDERNESS AREA
WILDLIFE HABITAT MAP 3-2
VAN DEEMAN 2-07
MOCKINGBIRD 2-08
MOUNT DAVIS 2-21
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT

TABLE 3-2
SPECIAL STATUS WILDLIFE
BUREAU OF LAND MANAGEMENT, ARIZONA

Species	Listed By Agency1/	Listed By Status2/	Wilderness Study Areas: Van Deeman	Mocking-bird	Black Mountains North	Burns Spring	Mount Tipton	Grapevine Wash	Grand Wash Cliffs	Mount Davis	Mount Nutt	Warm Springs	South Bradshaws East	Sierra Estrella	Ragged Top	Apache Box	Hoverrocker
Peregrine Falcon (Falco peregrinus)	F S	E III	-	-	0	0	0	-	X	-	0	0	-	0	-	-	-
Prairie Falcon (Falco mexicanus)	B	S	0	0	0	0	X	0	X	0	0	0	-	0	0	X	X
Merlin (Falco columbarius)	B	S	0	0	0	0	0	0	0	0	0	0	-	0	-	-	-
Swainson's Hawk (Buteo swainsoni)	F B C	S	0	0	0	0	X	0	0	0	0	0	-	0	-	X	X
Ferruginous Hawk (Buteo regalis)	F B C	S	0	0	0	0	X	0	X	0	0	0	-	0	-	-	-
Zone-tailed Hawk (Buteo albonotatus)	B	S	0	0	0	0	X	-	0	0	0	0	-	-	-	-	-
Sharp-shinned Hawk (Accipiter striatus)	B	S	0	0	0	0	X	-	0	0	0	0	-	0	-	-	-
Coopers Hawk (Accipiter cooperii)	B	S	0	0	0	0	X	0	0	0	0	0	0	0	X	-	-
Golden Eagle (Aquila chrysaetos)	B	S	X	X	X	X	X	X	X	X	X	X	0	0	X	X	X
Burrowing Owl (Athene cunicularia)	B	S	0	0	0	0	0	0	0	0	0	0	-	0	-	X	X
Great Egret (Casmerodius albus)	S	IV	0	0	0	0	0	-	0	0	0	0	-	-	-	-	-
Snowy Egret (Egretta thula)	S	IV	0	0	0	0	0	-	0	0	0	0	-	-	-	-	-
Black-Crowned Night Heron (Nycticorax nycticorax)	S	IV	0	0	0	0	0	-	0	0	0	0	-	-	-	-	-
Desert Tortoise (Gopherus agassizi)	F S	C III	0	0	0	0	-	-	-	0	0	0	-	X	X	-	-
Gilbert's Skink (Eumeces gilberti)	F S	C IV	0	0	0	0	0	-	0	0	0	0	0	-	-	-	-
Desert Night Lizard (Xantusia vigilis)	B	S	0	0	0	0	X	0	0	0	0	0	-	0	-	-	-
Gila Monster (Heloderma suspectum)	F B C	S	0	0	0	X	X	0	0	0	0	0	0	X	X	-	-
Desert Rosy Boa (Lichanura trivirgata)	B	S	0	0	0	0	X	-	0	0	0	0	-	0	-	-	-
Desert Bighorn (Ovis canadensis)	S	III	X	X	X	X	-	X	-	X	X	X	-	X	X	-	-
Kit Fox (Vulpes macrotus)	B	S	0	0	0	0	-	-	-	0	0	0	-	-	-	-	-
Goldroad Fonticellia (Fonticellia sp.) (snail)			-	-	-	-	-	-	-	-	X	X	-	-	-	-	-
	TOTAL SPECIES		19	19	20	20	17	10	17	19	21	21	4	14	6	4	4

Key: X = verified; 0 = probable use
1/ F = U.S. Fish & Wildlife Service; S = Arizona Game and Fish Commission; B = Bureau of Land Management
2/ E = Endangered; C = Candidate Species (USFWS); S = Sensitive

I = Extirpated from Arizona.
II = In danger of being eliminated from Arizona.
III = Status in Arizona may be in jeopardy in the foreseeable future.
IV = Moderate threat to habitats occupied.

Source: Phoenix District Files

A livestock development in the southeastern corner consists of a flooded mine shaft which is being tapped by a windmill. A 0.9-mile pipeline leads from the well to a water storage tank and a trough, also within the WSA. This facility has deteriorated and blends into the surrounding terrain. Two wildlife water developments—a masonry dam/pothole catchment and a metal apron type catchment—were designed to blend into their surroundings. These developments therefore have but a minimal impact on the WSA's naturalness.

TABLE 3-3

CRUCIAL HABITATS AND ANIMAL POPULATIONS
Bureau of Land Management, Arizona

WSAs	Acres of Crucial Desert Bighorn Sheep Habitat	Number of Adult Resident Bighorn	Acres of Suitable Peregrine Falcon Habitat
Van Deeman	1,510	2	99,999
Mockingbird	4,000	2	—
Black Mountains North	14,400	60	8,640
Burns Spring	16,960	50	19,200
Mount Tipton	—	—	8,000
Grapevine Wash	2,200	3	—
Grand Wash Cliffs	—	—	4,480
Mount Davis	2,460	10	—
Mount Nutt	22,960	100	25,920
Warm Springs	76,800	100	5,120
South Bradshaws East	—	—	—
Sierra Estrella	9,830	unk	—
Ragged Top	3,780	unk	—
Apache Box	—	—	—
Hoverrocker	—	—	—

unk — unknown

Source: Phoenix and Safford District Files

Solitude. The Mockingbird WSA does contain opportunities for solitude, but only in the topographically complex western portion of the unit on the west slope of the Black Mountains. The numerous washes provide a number of hidden, secluded spots, and the rugged topography in general provides screening from the sights and sounds of other people. Because of the relatively small size of the western portion of the WSA (roughly 3 by 3 miles), solitude opportunities are outstanding only when considered in conjunction with the contiguous 17,970 acre National Park Service area under wilderness consideration.

Solitude opportunities in the eastern portion of the WSA are considered poor because of the level, open aspect of the terrain and lack of vegetative screening.

Primitive and Unconfined Recreation. Opportunities for hiking, backpacking, photography and sightseeing for zoological and geological features are found within the Mockingbird WSA. The possibility of viewing bighorn sheep, golden eagles, desert tortoise and Gila monsters is also available. The variety of colors and shapes in the volcanic hills and badlands to the west provides opportunities for sightseeing and photography. These opportunities are outstanding only when considered in conjunction with the contiguous National Park Service Unit 5 to the west.

In summary, the Mockingbird WSA does not possess outstanding opportunities for solitude or a primitive and unconfined recreation by itself, but does when considered along with contiguous National Park Service lands under wilderness consideration.

Special Features. Three wildlife species are listed as Threatened and Unique Wildlife of Arizona. The desert tortoise and bighorn sheep are described as species whose status in Arizona may be in jeopardy in the foreseeable future and the Gila monster is a federal candidate Category 2 species.

TABLE 3-4

PROTECTED PLANTS
Bureau of Land Management, Arizona

Common Name	Scientific Name	FWS Candidate Species	Listed By Arizona National Heritage Program
Cerbat beard tongue	*Penstemon bicolor* (T.S. Brane) Clokey & Keck spp. *roseus* Clokey & Keck	X	
Desert cassia	*Cassia armata* Wats.		X
Fishhook cactus	*Mammilaria thornberi*	X	
Freckled milk vetch	*Astragalus lentiginous* var. ambiguous	X	
Horsebrush	*Tetradymia stenolepis* Greene		X
Limestone milk vetch	*Astragalus titanophilis* Barneby	X	
Linear leaf rabbit brush	*Chrysothamnus teretifolius* (Dur. & Hilg)		X
Tumamoc globeberry	*Tumamoc macdougalii*		X

All scientific names follow Lehr 1978 and supplements published in the Journal of the Nevada Academy of Science.

Source: Phoenix District Files

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, about 167 active placer and lode mining claims effectively covered the entire Wilderness Study Area (WSA). Historical mining and exploration and active projects exist throughout this WSA. Currently no mining plans are on file with the Bureau for operations within the WSA, but two drilling projects are presently under way adjoining the WSA to the south and east and one trenching and tunneling project is active near the north boundary.

The WSA has probably produced gold and silver from vertical lying quartz veins associated with a mineralized zone near the foot wall of a detachment fault that coincides with the boundary between Tertiary volcanic and Precambrian granite. Various types of faults, including detachment faults, and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south and has produced gold and silver, with minor lead and zinc. The entire WSA has high potential for gold and silver mineral development. See Map 3-1 and Table 3-1 for high and moderate mineral potential.

The Mockingbird WSA is considered to have a low potential for oil, gas and geothermal. No known leasable minerals are in the WSA.

RECREATION USES

This small WSA has few natural amenities that would attract users seeking primitive and unconfined (nonmotorized) types of recreational pursuits. This WSA is quite remote from population centers and several nearby larger, topographically complex and accessible areas are more likely to attract the available pool of both nonmotorized and motorized users. Four miles of rugged and deteriorated vehicle ways bisect the eastern portion of this unit but receive only sporadic use. Present estimated use is nonmotorized 20 VDY, motorized use 60 VDY.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type throughout the unit. This area supports approximately 230 vertebrate species of which 19 are special-status species (Table 3-2). See the Black Mountains URA for detailed species lists and life history information (BLM 1977).

This area is part of the range of the Black Mountains desert bighorn sheep population and is contiguous to the Lake Mead National Recreation area which supports high densities of sheep. This WSA has 4,000 acres of crucial bighorn sheep habitat (Table 3-3 and Map 3-2) with up to two sheep.

Suitable habitat for the desert tortoise and Gila monster exists throughout the unit and for the Gilbert's skink in dry and wet canyons in association with turbinella oak. Ferruginous and Swainson's hawks are expected along the eastern fringes of the WSA coming in from nearby Sacramento Valley. Crucial habitats or population numbers for these five species are unknown. Population numbers and ranges of the 13 other special-status species are not known.

CULTURAL RESOURCES*

Although no sites are known in this WSA, this is probably a result of the low level of completed inventory.

Areas adjacent to the WSA suggest that at least four sites are present that are potentially eligible for the *National Register of Historic Places.* These sites are probably two prehistoric rock shelters and two old mines.

LAND USES

The WSA has 5,815 acres of public land, with no nonfederal holdings. The northern boundary to the WSA is formed by a power transmission line operated by Arizona Public Service Company within a 200-foot right-of-way (R/W) (AR-035604). The western boundary of the unit is formed by the Lake Mead National Recreation Area.

LIVESTOCK AND RANGELAND USES

Portions of Units A and B of the Big Ranch Allotment lie within the WSA (less than 1% of each). Unit A in the WSA has about 36 AUMs (the total use for controlled lands in Unit A equals 7,008 AUMs). An allotment management plan has been developed for Unit A and that portion of Unit B within the WSA is designated ephemeral.

VEGETATION

The vegetation is characteristic of the creosote bush-yucca association (Brown et al. 1979) of the Mohave desertscrub formation. No formal botanical inventories have been conducted in this area, however, suitable habitat for desert cassia and horsebrush (Table 3-4) may be found within the WSA.

BLACK MOUNTAINS NORTH WSA
(AZ-020-09) 19,900 acres

WILDERNESS VALUES

Location and Boundaries. The WSA is 25 miles northwest of Kingman and two to five miles east of Lake Mohave. It is bounded on the north by the Cottonwood Road, on the east by roads along Lost Cabin Wash and along Portland Wash and on the western and southern boundaries by the Lake Mead National Recreation Area. This 15,295-acre National Recreation Area is being considered by the National Park Service as potential

Visitor overlooks Black Mountain ridgeline and Colorado River Valley — Black Mountains North WSA.

wilderness (*Preliminary Wilderness Proposal*, USDI, National Park Service, Jan. 1979, and *Draft Environmental Impact Statement*, NPS/LMNRA, April 1985).

Naturalness. The Black Mountains North WSA is bisected by an 8-mile long portion of the Black Mountains. The northeastern corner of the WSA is a plateau which rises steadily but gently from the Detrital Valley to a crest of 4,000 feet. At this point the elevation drops dramatically 2,000 feet to the volcanic plain on the west. The rugged craggy peaks, ridges, volcanic plugs and dikes throughout the unit exhibit a variety of color and textural quality which enriches and amplifies the physiographic diversity of this unit. Several extremely steep V-shaped canyons provide a striking sense of depth and space which enhances the wildness and remoteness of the area. The vegetation in the WSA is characteristic of Upper Sonoran grassland (juniper grassland). Common species in the unit are juniper, Mohave yucca, catclaw, white bursage and creosote, along with several species of grasses. Wildlife within the area is typical of this region and includes cottontail rabbits, jackrabbits, coyotes, raptors and, of particular importance, bighorn sheep.

The human imprints within the WSA are insignificant. Several vehicle ways, two small pit reservoirs, three undeveloped water well sites, a few small exploratory mining pits and scrapes and eight miles of fencing are all well screened by terrain features. Wildlife water developments are two spring developments and two masonry dam/pothole catchments. These facilities were designed to blend into their surroundings.

Solitude. Outstanding opportunities for solitude are found in the many deep canyons in the central part where users can easily screen themselves from the sights and sounds of others. Other opportunities for solitude are found in the small valleys on the south side of the WSA, in the deeply cut washes on the volcanic plain to the west and in the low rolling hills of the plateau in its northeastern part. Given this extreme complexity of topography, users can attain a sense of aloneness and isolation anywhere within this WSA.

Primitive and Unconfined Recreation. Primitive recreation opportunities include the extremely colorful rock formations offering outstanding opportunities for the photographer. The area can accommodate many parties of backpackers for extended periods of time as well as for day hikers. The canyons, valleys and washes invite exploration by such users and by rockhounds and amateur geologists. Within this WSA is a mosaic of volcanic, intrusive igneous and sedimentary rocks such as andesite, lattite, rhyolite, granite, quartz, sand, silt and conglomerate. Several cliff-faced peaks and knife-edge ridges offer rock scramblers and technical rock climbers the opportunity to test their skills.

Though limited by terrain features, horseback riding is a possible use in the WSA, particularly in the southern and western portions on the low hills and over the volcanic plain. The study or observation of plant and animal species is possible. Of particular interest to any recreationist may be the presence of desert bighorn sheep in the mountains. Additionally, the National Park

Service's wilderness proposal for Unit B, which is contiguous to this WSA, would increase the already outstanding recreation opportunities existing in the Black Mountains North area.

Special Feature. Portions of this WSA have been identified as critical lambing grounds for the desert bighorn sheep, one of the Arizona state-listed Threatened and Unique Wildlife species whose existence in Arizona may be in jeopardy in the foreseeable future.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, there were 153 active placer and lode mining claims, as well as historical mining and exploration and active exploration in much of this WSA. There is currently one mining plan on file for a gold/silver mining and cyanide heap leach operation, but numerous sampling and mapping projects are presently under way which do not require plans. The leaching operation and access road have been excluded from the WSA at the boundary between the Black Mountains North and the Burns Spring WSAs. The limit of the area of exclusion is the zone of disturbance surrounding the activities. The mineral estate on 9,040 acres in 20 parcels and surface and mineral estate on 670 acres in two parcels within the WSA are privately owned.

The WSA has probably produced gold and silver from vertical lying quartz veins associated with a mineralized zone near the foot wall of a detachment fault that coincides with the boundary between Tertiary volcanic and Precambrian granite. Various types of faults, including detachment faults, and quartz veins comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south and has produced gold and silver, with minor lead and zinc. A north/south band within the WSA has high potential for gold and silver mineral development. Mordenite and clinoptilolite zeolite deposits are found at several localities in the Black Mountains. The zeolites found in this area have resulted from the alteration of the overlying clastic vitric Tertiary age volcanic tuffs. One zeolite location is known at the north end of the WSA along Cottonwood Road. See Map 3-2 and Table 3-1 for high and moderate mineral potential.

The Black Mountains North WSA is considered to have a low potential for oil, gas, and geothermal. No known leasable minerals are in the WSA.

RECREATION USES

This WSA offers many fine opportunities for primitive and unconfined types of recreation such as day hiking and overnight backpacking. The exceedingly colorful and topographically imposing terrain also attracts a number of photographers. This WSA is easily accessible via regularly maintained gravel roads along its eastern and northern boundaries. Nonmotorized use is increasing both as a result of this ease of access, and as a consequence of becoming better known to area residents during the last several years.

This WSA contains approximately 5.5 miles of vehicle ways. A two-mile segment of Lost Cabin Wash in the extreme southern portion is frequently used by drivers wishing to access Lake Mohave but avoid the Portland Mine complex. In the northern portion of the area ORVs travel along the ridge of the Black Mountains. Present nonmotorized use is 150 VDY, motorized use is about 200 VDY.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type throughout the unit. This area supports about 230 vertebrate species of which 20 are special-status species (Table 3-2). See the Black Mountains URA for detailed species lists and life history information (BLM 1977).

The WSA has up to 60 bighorn sheep on its 14,400 acres of crucial bighorn sheep habitat (Table 3-3 and Map 3-4) (which includes all but 300 acres of the 5,190-acre Lost Cabin lambing grounds).

The WSA has 8,640 acres of suitable habitat for the peregrine falcon, for the desert tortoise and Gila monster throughout the area and for the Gilbert's skink in dry and wet canyons in association with turbinella oak. Ferruginous and Swainson's hawks are expected along the eastern fringes of the WSA, coming in from nearby Sacramento Valley. Crucial habitats or population numbers are unknown for these five species within this area as are the population numbers and ranges of the other special-status species.

WILD HORSE AND BURRO PROGRAM

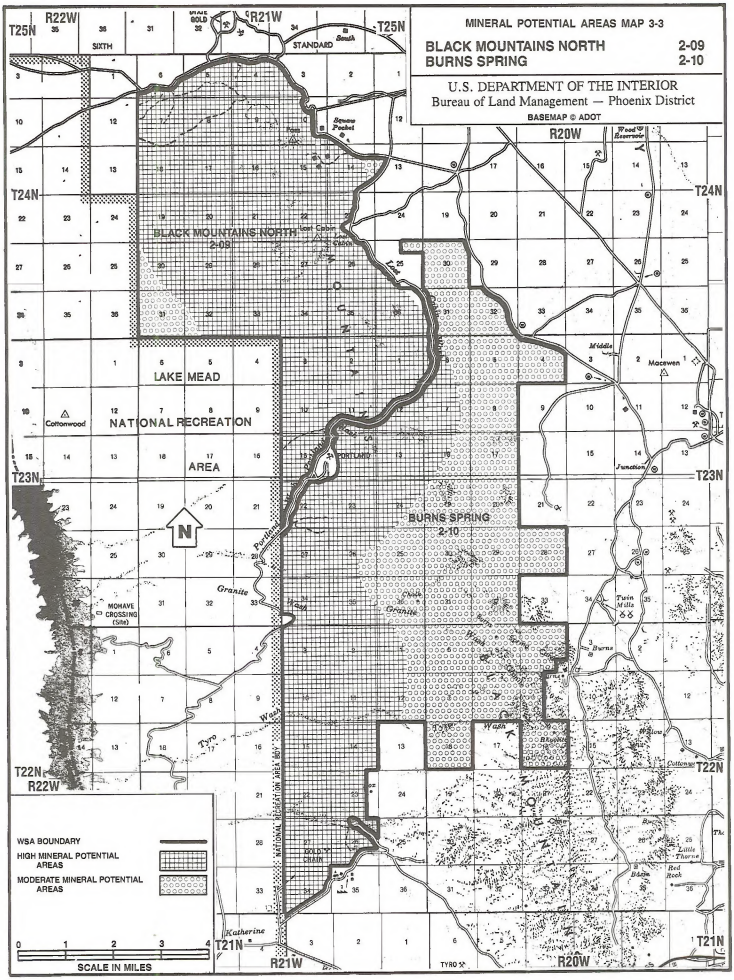
Burros live throughout the western half of the unit. Because of the lack of water, with the exception of a weak spring in the northern end, most burro use is in the winter and spring. A major vehicle thoroughfare down Lost Cabin Wash to Lake Mohave cuts across the southern tip and is used to place traps (bait and wing) in the heart of burro use areas close to the lake.

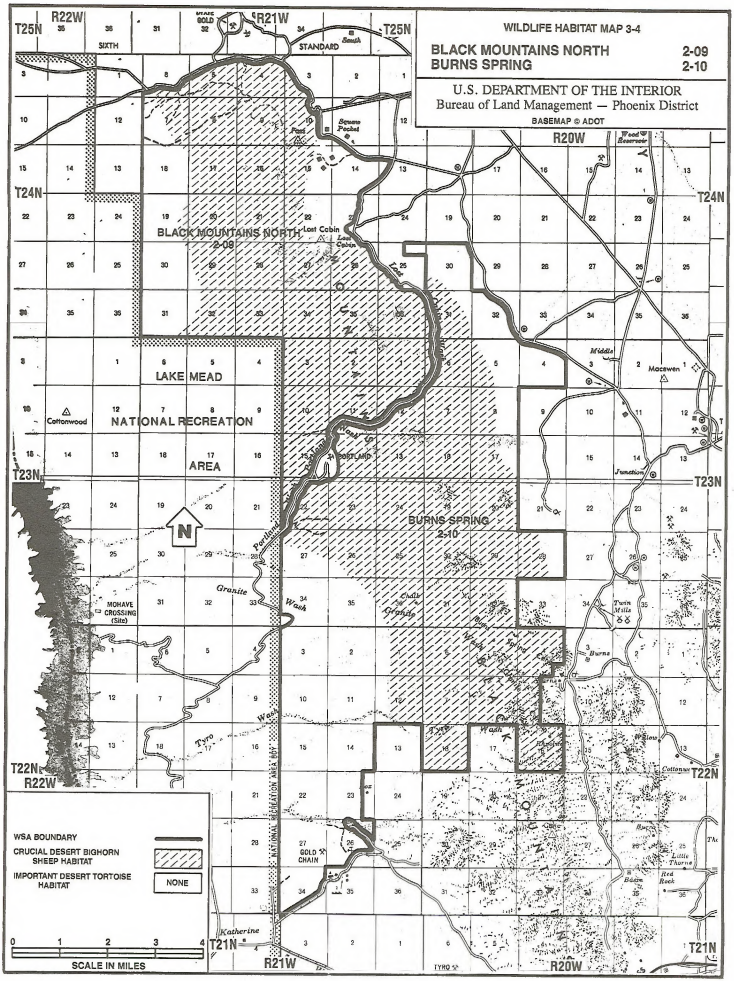
CULTURAL RESOURCES

Although no sites are known in this WSA, this is probably a result of the low level of completed inventory. Areas adjacent to the WSA suggest that at least four sites are present that are potentially eligible for the *National Register of Historic Places*. These sites are probably two prehistoric campsites, a prehistoric rockshelter and an old mine.

LAND USES

The WSA has 19,900 acres of public land. Nonfederal holdings within the WSA are 670 acres of surface and mineral estate and 9,040 acres of mineral estate. The northern boundary of the WSA is the Cottonwood road, maintained by Mohave County within a 100-foot R/W (A-20862). The western boundary of the unit


MINERAL POTENTIAL AREAS MAP 3-3
BLACK MOUNTAINS NORTH 2-09
BURNS SPRING 2-10
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT
BLACK MOUNTAINS NORTH 2-09
BURNS SPRING 2-10
LAKE MEAD
NATIONAL RECREATION
AREA
WSA BOUNDARY
HIGH MINERAL POTENTIAL AREAS
MODERATE MINERAL POTENTIAL AREAS
SCALE IN MILES
0 1 2 3 4
T25N
T24N
T23N
T22N
T21N
R22W
R21W
R20W
SIXTH
STANDARD
Cottonwood
Macowen
Middle
Junction
Twin Mills
Big Burns
Granite
Wash
Tyn
Paradise
Katherine
Little Thurse
Bed Rock
Basin
Cottonwood
Wood'S Reservoir
Smoke Pocket
Hoot Cabin
Canyon
MOHAVE CROSSING (SRA)
GOLD CREEK
TYRO
NATIONAL RECREATION AREA BDY


WILDLIFE HABITAT MAP 3-4
BLACK MOUNTAINS NORTH 2-09
BURNS SPRING 2-10
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT
R22W
R21W
R20W
T25N
T24N
T23N
T22N
T21N
SIXTH
STANDARD
BLACK MOUNTAINS NORTH
2-09
BURNS SPRING
2-10
LAKE MEAD
NATIONAL RECREATION
AREA
Cottonwood
Lost Cabin
Middle Wash
Macowen
Junction
Pudding
Granite
Wash
MOHAVE CROSSING (Site)
Twin Mills
Burns
Cottonwood
Little Thurber
Red Rock
Katherine
GOLD CHAIN
NATIONAL RECREATION AREA BDY
N
WSA BOUNDARY
CRUCIAL DESERT BIGHORN SHEEP HABITAT
IMPORTANT DESERT TORTOISE HABITAT
NONE
0 1 2 3 4
SCALE IN MILES

is formed by the Lake Mead National Recreation Area. The eastern boundary to the unit is the Lost Cabin Wash road which provides access to patented and unpatented mining claims. The road is maintained by the claimants under the authority of the mining law regulations.

LIVESTOCK AND RANGELAND USES

Portions of three grazing allotments, Portland Spring (4%), Fort MacEwen Unit A (10%), and Fort MacEwen Unit B (32%) are in the WSA. Portland Spring and Unit B of Fort MacEwen are designated ephemeral.

The portion of Unit A of Fort MacEwen within the WSA has approximately 72 AUMs of use associated. Total use on controlled lands within the allotment is 2,640 AUMs. Unit A is under an allotment management plan.

VEGETATION

The vegetation of this unit contains elements of the Mohave desertscrub and great basin conifer woodland formations (Brown et al. 1979). The lower elevations (1400-3500 feet) support several desertscrub associations. The higher elevations a juniper-mixed grass association. No formal botanical inventories have been conducted in this area, although suitable habitat for desert cassia and horsebrush (Table 3-4) are on the lower elevations of the west slope.

BURNS SPRING WSA
(AZ-020-10) 30,600 acres

WILDERNESS VALUES

Location and Boundaries. The WSA is approximately six miles north of U.S. Highway 68 and is adjacent to the eastern edge of the southern portion of the Lake Mead National Recreation Area. The WSA is bounded by the Portland Mine access road and Lost Cabin Wash on the northwest, a portion of a ranch road on the northeast, state and private land on the east, a road on the south and the Lake Mead National Recreation Area on the west.

Naturalness. The Burns Springs WSA is a five-by-ten mile portion of the Black Mountains and a large portion of an outwash plain on the west side of the unit. Elevations range from 1,600 feet in the plains to 4,165 feet at the highest point in the mountains, a rise of more than 2,500 feet. The mountains trend northwest to southeast and their arrangement provides a high degree of topographic complexity. Dramatic peaks, rock spires, buttes with steep cliff faces, mesas and sloping saddles make up the ridgelines. Numerous narrow canyons in the higher portions widen into expansive sandy washes and valleys trending west towards the outwash plain. Many smaller side canyons branch off the larger ones, adding to the topographic complexity. Smaller drainages on the eastern edge of the area feed into a large north/south trending wash and valley.

Water flows from springs in some of the higher canyons but seeps underground within a short distance into the canyons. Small waterfalls and pools are present when water is running freely after a rainstorm. Vegetation is Upper Sonoran grassland juniper grassland) with the exception of riparian vegetation in a few of the higher canyons where springs are. Dominant plants include Mohave yucca, juniper, catclaw, creosote, cholla and annual grasses on mountains slopes and plains and willow, nettle and watercress in the riparian areas. Among the wildlife this area provides habitat for are: coyote, Gambel's quail, cottontail, jackrabbits, raptors, desert bighorn sheep as well as many small mammals and reptiles.

The few minor human imprints are vehicle ways, inactive mining and a cement water trough that appears to be unused. Four miles of vehicles ways extend for short distances into the WSA. The WSA has some old mining developments, (a few pits, shafts and exploration scrapes), seven miles of fence and two livestock spring developments. Both springs are fenced at the source, with water piped to 500-gallon troughs in each case. Short vehicle ways lead to each of these developments. Wildlife water developments are three spring developments and one masonry dam/pothole catchment. These facilities were designed to blend into their surroundings and, therefore, have but a minimal impact on the WSA's naturalness.

Solitude. Within the boundaries of Burns Spring WSA are a number of opportunities for the wilderness visitor to achieve a sense of solitude. The topography provides innumerable areas that screen the visitor from others and the diversity and complex design of the landforms aid in this screening. The western portion of the unit is an outwash plain; here many east-west washes cut deep into the rolling hills of desert grassland. The remaining area is primarily the steep, rugged and highly dissected Black Mountains. These topographic features and the Upper Sonoran desert grassland with its wide valleys and deep washes provide the user with many outstanding opportunities for solitude.

The character of the surrounding landscape and the isolated location of the Burns Springs WSA add to this feeling of aloneness. Directly north, across the Portland Mine access road, is the 19,900 acres Black Mountains North Wilderness Study Area (Unit 2-09), and to the west is the 15,295 acre Lake Mead National Recreation Area Wilderness Proposal (Unit B, Cottonwood Valley). The vastness of this additional land promotes the visitor's feeling of solitude.

Primitive and Unconfined Recreation. Diverse opportunities for primitive and unconfined recreation, some outstanding, include hiking, backpacking, rock climbing, photography and rock hounding. Opportunities for day hikes and photography are outstanding. The red volcanic rocks blackened with desert varnish, and the yellow outcrops of limestone that form the jagged cliffs and steep canyons present colorful backdrops for the photographer or hiker. The area itself could support several backpacking parties on overnight stays. If used along with the

Lake Mead Recreation Area Wilderness Proposal and WSA 2-09 (Black Mountains North), extended backpacking trips would be available.

The Black Mountains rise from 1,500 feet on the desert floor to more than 4,000 feet, producing spectacular rock formations with many rock climbing sites. Pitches of varying degrees of difficulty provide opportunities and challenges for the everyday mountain climber or the technical rock climber. In summary, this area's diverse opportunities are outstanding for primitive and unconfined recreation.

Special Features. The desert bighorn sheep are state listed in Arizona, primarily because of reduction in their habitat. Areas like Burns Springs provide needed critical lambing grounds for this species.

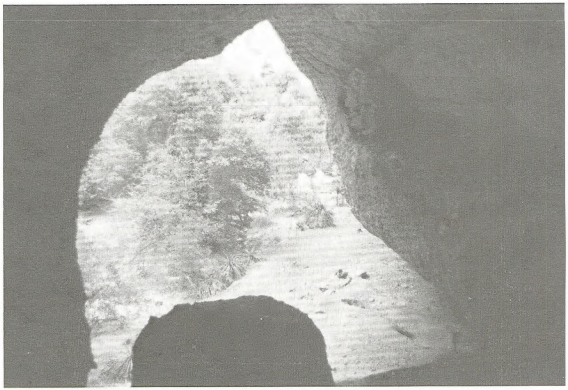
As described under Naturalness, this area contains portions of a diverse and colorful mountain range with dramatic peaks, steep canyons, sandy washes, and pristine valleys - a highly scenic area.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, there were 265 active placer and lode mining claims in the WSA along with historic mining and exploration and some active exploration in the WSA. One mining plan is on file with the Bureau for a gold/silver mining and cyanide heap leach operation within the WSA, but numerous sampling and mapping projects not requiring plans are presently under way. The leaching operation and access road have been excluded from the WSA at the boundary between the Black Mountains North and the Burns Spring WSAs. The limit of the area of exclusion is the zone of disturbance surrounding the activities. The minerals estate on 8,320 acres in thirteen parcels within the WSA are privately owned.

The WSA has probably produced gold and silver from vertically oriented quartz veins associated with a mineralized zone near the foot wall of a detachment fault that coincides with the boundary between Tertiary volcanic and Precambrian granite. Various types of faults, including detachment faults and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south and has produced gold and silver, with minor lead and zinc. A north/south band within the WSA has high potential for gold and silver mineral development. Mordenite and clinoptilolite zeolite deposits are found at several localities in the Black Mountains and geological inference suggests that zeolites should be present in the same altered units in the Burns Spring WSA. The zeolites have resulted from the alteration of the overlying clastic vitric Tertiary age volcanic tuffs. See Map 3-3 and Table 3-1 for high and moderate mineral potential.

The Burns Spring WSA is considered to have a low potential for oil, gas for geothermal. No known leasable minerals are in the WSA.



Caves in the Black Mountains have revealed a long period of occupation by prehistoric peoples.

RECREATION USES

This large and topographically complex WSA provides very good opportunities for nonmotorized recreational activities such as day hiking, birdwatching, wildlife observation, photography and overnight backpacking trips. The four miles of vehicle ways are short, deteriorated spur trails which receive only a small amount of sporadic use. Present nonmotorized use in this WSA is 200 VDY, motorized use 100 VDY.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type throughout the unit. This area supports approximately 230 vertebrate species of which 20 are special-status species (Table 3-2). See the Black Mountains URA for detailed species lists and life history information (BLM, 1977).

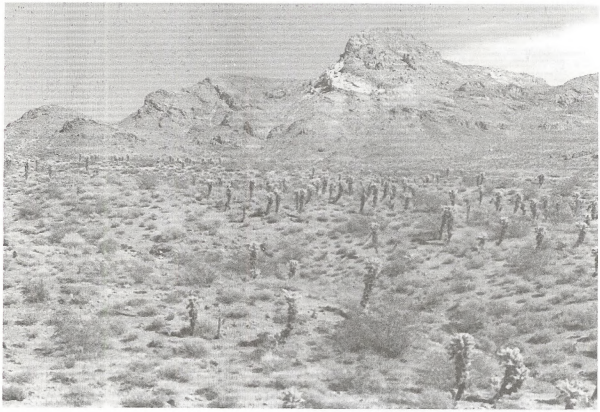
The area's 16,960 acres of crucial bighorn sheep habitat is extremely important to the Black Mountains desert bighorn sheep population (up to 50) because it encompasses one-half of the Burns Spring lambing grounds (Table 3-3 and Map 3-4).

There are 19,200 acres of suitable peregrine falcon habitat, along with suitable habitat for the desert tortoise and Gila monster and for the Gilbert's skink in dry and wet canyons in association with turbinella oak. Ferruginous and Swainson's hawks are expected along the eastern fringes of the WSA, coming in from nearby Sacramento Valley. Neither crucial habitats nor population numbers for these five species nor population numbers and ranges of the 13 other special-status species are known.

WILD HORSE AND BURRO PROGRAM

Burros live yearlong from Township 23 North and south throughout the WSA and are dependent on several major springs. Burro captures are made on a regular basis near Chalk and Calles Springs (improved-requires maintenance), Granite Wash and Box Springs (unimproved springs) and Dug Well. Capture efforts include roping (helicopter and motor vehicles), wingtrapping (helicopter and motor vehicles), watertrapping (motor vehicles and temporary corrals), and haytrapping (motor vehicles and temporary corrals). Both Calles and Chalk Spring have burro proof fences around the springs with water piped to a trough outside the exclosure. To ensure that these developments are functioning in the manner for which they were designed, the troughs have to be regularly checked to ensure access to water and that no burros have entered the exclosures (could mean certain death for the trapped burros).

Access along existing roadways and washes is necessary to effectively monitor the burro population (100-150), and to annually read vegetation monitoring plots. These study plots are



Black Mountains and desert alluvium - Burns Spring WSA.

Burro capture with wranglers

within a half mile of Calles Spring, a half mile of Chalk Spring, and a half mile of Box Spring. About every five years the burro population inventory crews use low level helicopter flights.

CULTURAL RESOURCES

Because of the incompleted inventory no sites are known in this WSA, however, they probably exist. Areas adjacent to the WSA suggest that at least five sites are present that are potentially eligible for the *National Register of Historic Places*. These sites are probably two prehistoric rock shelters, two old mines and a prehistoric campsite.

LAND USES

The WSA has 30,600 acres of public land, including 8,320 acres of privately owned mineral estate. The western boundary of the unit is formed by the Lake Mead National Recreation Area.

LIVESTOCK AND RANGELAND USES

Portions of four grazing allotments are in the WSA—Thumb Butte (1%), Portland Spring (17%)(both ephemeral), Gediondia (9%)(24 AUMs of perennial use), and Unit A of Fort MacEwen (44%)(396 AUMs of perennial use). Unit A of the Fort MacEwen allotment is under an allotment management plan.

VEGETATION

The vegetation of the area has elements of the Mohave desertscrub and great basin conifer woodland formations (Brown et al. 1979). The lower elevations (1400-3500 feet) support several desertscrub associations while the higher elevations support a juniper-mixed grass association. No formal botanical inventories have been conducted in this area, although suitable habitat for desert cassia and horsebrush (Table 3-4) is found in the WSA on the lower elevations of the west slope.

MOUNT TIPTON WSA
(AZ-020-12/42) 34,060 acres

WILDERNESS VALUES

Locations and Boundaries. The Mount Tipton WSA encompasses the entire northern half of the Cerbat range, extending from three miles north of the historic mining community of Chloride in the south, northward into the area known as the Cerbat Pinnacles. The boundaries of the WSA are formed by a mixture of private land and roads. On the northwest, the north and the east side, the boundary forms an irregular pattern because of the checkerboard ownership of private and public lands. The southwest border is either private land or the Putnam Wash Road. The Big Wash Road forms the southern boundary from a mile east of Highway 93 to Packsaddle Mountain.

Naturalness. Mount Tipton WSA is an eleven-mile-long portion of the rugged, granitic Cerbat Mountains. The entire Cerbat Range north of the BLM-maintained Chloride/Big Wash Road is in the WSA. Elevations in this unit range from 3,500 feet on the desert bajadas to 7,148 feet on Mount Tipton. Most of the pristine Cerbat Pinnacles, north of and below Mt. Tipton are within the WSA. The "Pinnacles" consist of immense tusk-like rows of maroon-colored spires arrayed majestically above open, tawny-colored valleys. In the area from Mount Tipton southward, the drainages descend from the peaks, forming deep washes divided by steep and highly vegetated ridges. Large granite outcrops dot the ridgeline, offering stark color contrasts of grey and red rocks against the green vegetation of the mountain slopes.

Vegetation in this area is diverse, with pine-oak woodland on the north and northwest-facing ridges, including species such as single leaf pinyon pine, shrub live oak, point leaf manzanita, bear grass and desert ceanothus. On the northeast slope of Mount Tipton, particularly in the drainages, are small stands and single isolated individual ponderosa pine. On the south and west facing slopes, the oak-ceanothus-chapparal community is dominant with both shrub live oak and desert ceanothus very common. On the lower foothills vegetation is somewhat sparse but includes Mohave yucca, juniper in the sheltered areas, and the grasses and shrubs associated with the desert grassland on the exposed slopes. This area provides excellent habitat for mule deer and bobcat. Raptors are quite numerous, as are Gambel's quail and cactus wren.

Within this WSA, human imprints are 11.55 miles of pasture and boundary fence, 11 vehicle ways (9.7 miles), a 15 x 15 foot barbed wire fence study exclosure, 4.3 miles of 2-inch plastic water pipeline, seven troughs and a corral. There are also eight old metal storage tanks of various types and sizes along the vehicle ways.

Wash from northern portion of Mount Tipton area.

Solitude. Outstanding opportunitics for solitude are present throughout this large and topographically complex unit. The drainages are deep, dissected by steep highly vegetated ridges providing both vegetative and topographic screening. Within these drainages are small valleys and bowls with outstanding opportunities for solitude.

Primitive and Unconfined Recreation. The peaks within the area reach heights over 7,000 feet and present outstanding opportunities for sightseeing and hiking. From the top of several of these peaks one may view mountain ranges and valleys in all directions. Opportunities for day hikes, extended overnight backpacking trips and photography abound.

The Cerbat Pinnacles are an accessible, scenic and especially intriguing geologic area. This strikingly photogenic area contrasts strongly with the equally wild, but more "conventionally" scenic portions of the WSA from Mount Tipton southward.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, there were about 146 active placer and lode mining claims in the WSA, along with historical mining and exploration and active exploration on much of the 34,060 acres. The Bureau has no plans on file, but sampling and mapping projects are presently under way and these do not require plans. There are 10,500 acres of nonfederal minerals which include 2,240 acres of private surface.

Copper, molybdenum, lead, zinc, silver and gold have been produced from quartz veins, disseminated bodies, local concentrations, and mineralized northwest trending fault zones, which extend from the vicinity of McConnico on the south through the Mount Tipton WSA, to the White Hills on the north. These zones are recognizable north and south of the WSA, but disappear under Miocene volcanics, fanglomerates and recent alluvium. Recent studies indicate the existence of potentially economic mineralization within the boundaries of the WSA. See Map 3-5 and Table 3-1 for high and moderate mineral potential.

The Mount Tipton WSA is considered to have a zero potential for oil, gas, and for geothermal. No known leasable minerals are in the WSA.

RECREATION USES

This large and topographically complex WSA provides a range of high quality opportunities for those users seeking primitive and unconfined types of recreation. Nonmotorized users in this WSA participate in day hiking, photography and overnight backpacking. The WSA is easily accessible from several points, and is attracting an increasing number of nonmotorized users as it becomes better known.

The WSA's 9.7 miles of vehicle ways, entering from numerous points, are short, unmaintained spur trails which dead end at spring developments. They do, however, attract some vehicle-based recreational use, primarily during hunting season. Recreational 4-wheeling is not important here because there are no particular vehicle accessible "destination" attractions nor are there any "thru" ways with established patterns of regular vehicle use. Present nonmotorized use in this WSA is 400 VDY, motorized use 100 VDY.

WILDLIFE VALUES

Mohave desert shrub, chaparral, and pinyon-juniper are the dominant habitats in this WSA, with small patches of ponderosa pine communities on some of the peaks and eastern-facing drainages. There are about 230 vertebrate species of which 17 are special-status species (Table 3-2). See the Cerbat Mountain Planning Unit URA for a detailed species list and life history information (BLM, 1972).

Suitable peregrine falcon habitat covers 8,000 acres of the WSA;. suitable habitat for the Gilbert's skink in dry and wet canyons in association with turbinella oak; Gila monster habitat in the Mohave desert shrub and chaparral communities; Ferruginous and Swainson's hawks in the lower elevations, most frequently encountered on the eastern fringes in association with nearby Hualapai Valley. Crucial habitats or population numbers for these five species and the 12 other special-status species are unknown (See Table 3-2).

WILD HORSE AND BURRO PROGRAM

Wild horses are found from Mount Tipton south to the southern boundary. Major access to this area's horse population is along cherrystemmed roads and vehicle ways into Putnam and Arizona springs. Though no capture events have occurred in this area in recent years, these access routes would be necessary for future population control. Also, vegetative monitoring sites will probably be established in these areas to monitor vegetative use in the northern end of the Cerbat Wild Horse Management Area.

Capture efforts would include helicopter pursuit, motor vehicles for transporting and temporary corrals in any trapping effort. Motor vehicles would also be necessary to reach vegetative monitoring sites. Population monitoring would be necessary every three to five years, requiring low level helicopter flights.

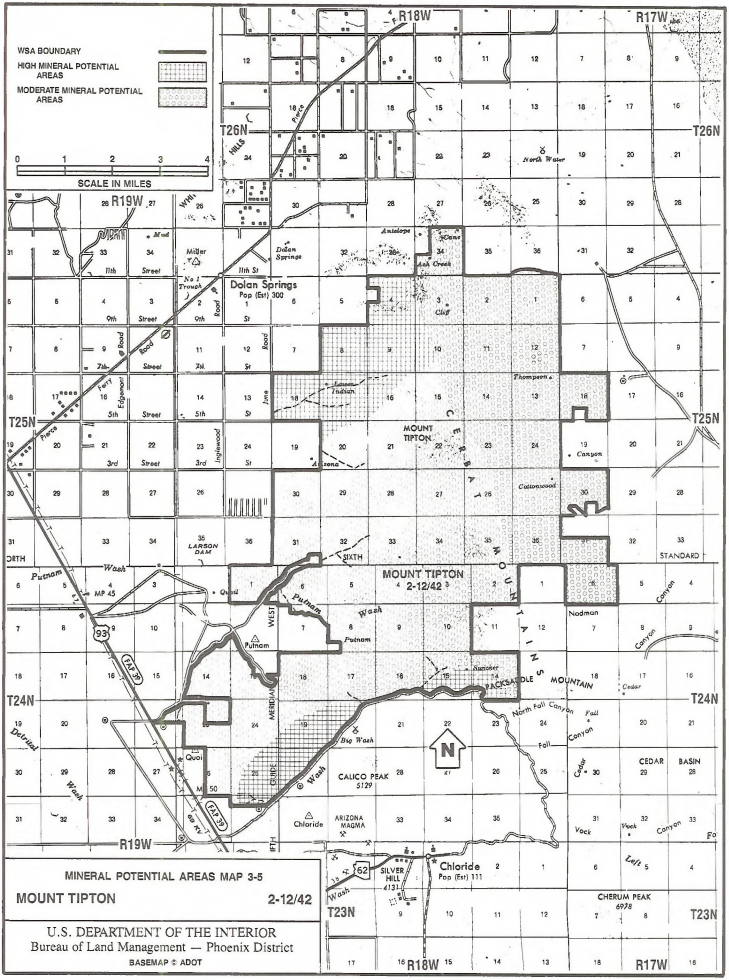
CULTURAL RESOURCES

The known cultural resources are five sites that are probably eligible for the *National Register of Historic Places.* These sites are temporary prehistoric/historic camp sites and a rock shelter with late historic burials. The burial site is unusual in that it may represent the transition from cremation to burial among historic Hualapai Indians.

LAND USES

The WSA's 34,600 acres encloses 1,600 acres of private surface and mineral estate and 10,500 acres of private mineral estate only.

The southern boundary of the unit is formed by the Chloride - Big Wash Road. The Bureau of Land Management has reserved a 100-foot-wide R/W (A-7017) to itself for the road.


WSA BOUNDARY
HIGH MINERAL POTENTIAL AREAS
MODERATE MINERAL POTENTIAL AREAS
0 1 2 3 4
SCALE IN MILES
R18W
R17W
R19W
T26N
T25N
T24N
T23N
Dolan Springs
Pop (Est) 300
MOUNT TIPTON
2-12/42
CALICO PEAK
5129
ARIZONA MAGNA
SILVER HILL
4131
Chloride
Pop (Est) 111
CHERUM PEAK
6978
JACKSADDLE MOUNTAIN
Putnam Wash
Big Wash
North Fork Canyon
Cedar Canyon
Vack Canyon
Nodman Canyon
Thompson Canyon
Cottonwood Canyon
Antelope Canyon
Ash Creek
Dolan Springs
Miller Wash
Detrital Wash
Nwash
Lwash
Fwash
Mwash
Twash
Swash
Hwash
Jwash
Kwash
Pwash
Rwash
Bwash
Cwash
Dwash
Ewash
Gwash
Iwash
Owash
Qwash
Uwash
Vwash
Xwash
Zwash
Ywash
Ww

LIVESTOCK AND RANGELAND USES

Portions of four grazing allotments are in the WSA: Cedar Canyon (less than 1%), Mount Tipton (75%), Cane Springs (15%), and Quail Springs (38%). The latter two are under existing allotment management plans. Approximate numbers of AUMs of use for these allotments within the WSA equals 48, 552, 684, and 1,104 AUMs, respectively. Total use for controlled lands equals 6,900, 744, 4,596, and 2,904 AUMs, respectively.

VEGETATION

Diverse vegetation in this WSA includes associations of the Mohave desertscrub, interior chaparral and great basin conifer woodland formations (Brown et al. 1979). Several mixed-shrub desertscrub associations and the shrub live oak-mixed sclerophyll association are widely distributed at the lower elevations. Mid-elevations are dominated by juniper grassland and pinyon-juniper associations. On the northeast slope of Mount Tipton, particularly in the drainages, are small stands and single isolated individuals of ponderosa pine. These trees are likely residuals and occur within pinyon-juniper and interior chaparral associations.

No formal botanical inventories have yet been conducted in this area, however, there is suitable habitat for cerbat beard tongue (Table 3-4). Specimens of this subspecies were collected in 1937 near Chloride, Arizona. Gravelly washes around 2600 feet elevation provide suitable habitat for this subspecies. Associated species include creosote bush, joshua tree, wire lettuce and cheeseweed.

Mohave yucca (*Yucca schidigera* Roezl.) has been commercially harvested on a 30-year rotation schedule in the Kingman Resource Area since 1954 (Table 2-5). Yuccas are harvested in accordance with specific stipulations established by the BLM to mitigate environmental damage and to perpetuate the species. Up to 200 tons of yucca trunks are harvested yearly for extraction of organic substances for manufacture of liquid fertilizer and for other uses. About 280 acres are suitable for harvest on the western periphery of the WSA.

GRAPEVINE WASH WSA
(AZ-020-14) 2,200 acres

WILDERNESS VALUES

Location and Boundaries. Grapevine Wash WSA is about 60 miles north of Kingman, Arizona, contiguous to a Lake Mead National Recreation Area wilderness proposal. The eastern boundary of Grapevine Wash WSA also borders on the undeveloped western boundary of Grand Canyon National Park. Private land borders the southern boundary. Access to the WSA is by horseback or by hiking only.

Naturalness. Grapevine Wash WSA contains a small portion of the Grand Wash Cliffs and its associated bajada. The southeast tip of the unit drops abruptly 1,200 feet to the west sloping bajada, then gradually west to the Grapevine Wash. The elevation of the cliffs is 5,200 feet and only 2,600 feet near the wash, a change of 2,600 feet across the two-mile-wide unit. The higher elevations are primarily sedimentary rock while the lower elevations are sand, silt, and gravel. The area is dissected by numerous drainages running east to west.

Vegetation is of Mohave Desert Scrub type—mainly sparse stands of banana yucca, blackbrush, Mormon tea, ocotillo and haplopappus. The entire unit appears to have been affected primarily by the forces of nature. The area has retained its primeval character and has no evidence of human activity. Though less than 5,000 acres in size, the Grapevine Wash WSA meets the size criteria because it is contiguous with lands managed by another agency (NPS/Lake Mead National Recreation Area) which have been formally determined to have wilderness values.

Solitude. The opportunities for solitude are not considered to be outstanding within any portion of the 2,200 acre WSA. However, this unit is contiguous to large tracts of land that do offer high possibilities for outstanding opportunities for solitude. The WSA alone lacks the large size and natural screening which would provide the user with outstanding opportunities for solitude, however, the opportunities are enhanced greatly when this area is considered as part of the greater expanse of contiguous NPS wildlands.

Primitive and Unconfined Recreation. Opportunities for primitive and unconfined recreation are limited because of the small size of the WSA and its lack of topographic and vegetative diversity which would channel users into the existing washes and create congested areas. This would affect such activities as hiking, backpacking, rock climbing and general sightseeing. In addition, the lack of topographic and vegetative diversity curtails any outstanding opportunities to view botanical, zoological, or geological features. Grapevine Wash WSA is, however, adjacent to a proposed NPS wilderness area of great size and topographic and vegetative diversity.

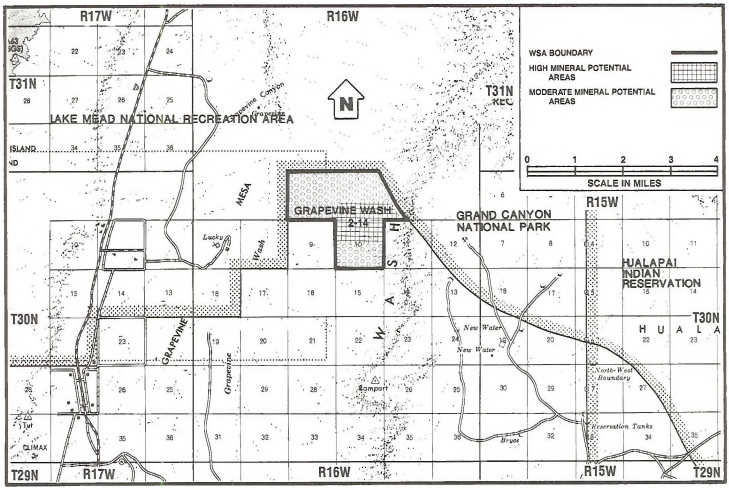
Special Features. This WSA is adjacent to an undeveloped portion of Grand Canyon National Park and to a National Park Service Proposed Wilderness (Lake Mead National Recreation Area Unit No. 22).

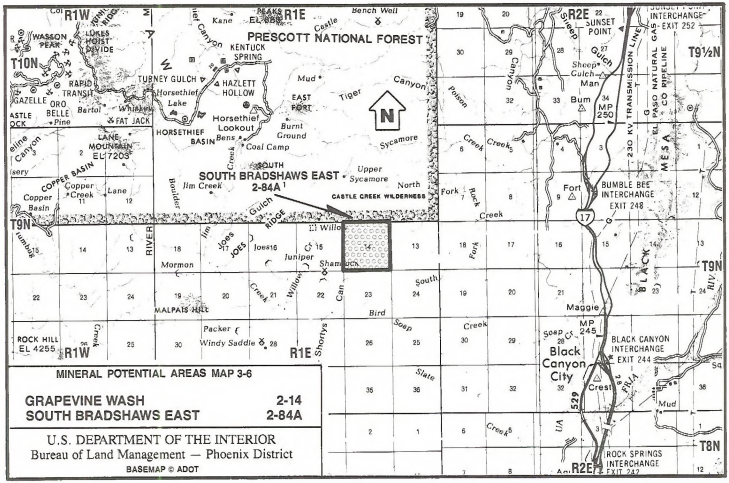
MINERALS AND ENERGY RESOURCES

As of August, 26 1986, there were no mining claims but historical mining exploration has taken place within the 2,200 acres of this WSA. The Bureau currently has no plans on file, but sampling and mapping projects have taken place which do not require plans.

The potential for discovery of economic values of mica, copper, and precious metals within the WSA is moderate (see Map 3-6 and Table 3-1).

The Grapevine Wash WSA is considered to have a zero to low potential for oil and gas and low for geothermal. No known leasable minerals are in the WSA.


WSA BOUNDARY
HIGH MINERAL POTENTIAL AREAS
MODERATE MINERAL POTENTIAL AREAS
0 1 2 3 4
SCALE IN MILES
R17W
R16W
R15W
T31N
T30N
T29N
LAKE MEAD NATIONAL RECREATION AREA
GRAPEVINE WASH
2-14
GRAND CANYON NATIONAL PARK
HUALAPAI INDIAN RESERVATION
HUALA
MESA
GRAPEVINE
Lucky Wash
New Water
Camport
Bruce
North-West Boundary
Reservation Tanks
CLIMAX
N


R1W
R1E
R2E
T10N
T9N
T9½N
T8N
PRESCOTT NATIONAL FOREST
KENTUCK SPRING
HAZLETT HOLLOW
TURNEY GULCH
Horsethief Lake
HORSETHIEF BASIN
Horsethief Lookout
EAST FORT
Tiger Canyon
Coal Camp
Sycamore
Upper Sycamore
North Fork
SOUTH BRADSHAWS EAST
2-84A
CASTLE CREEK WILDERNESS
Jim Creek
Boulder Gulch
Juniper
Mormon
MALPAIS HILL
Bird
Soap Creek
Maggie
Black Canyon City
Crest
Mud
Sheep Gulch
Man
Bum
Fort
Bumble Bee
Sunset Point
Poison Canyon
Bench Well
Kane
Castle
WASSON PEAK
LOKES HOLE DIVIDE
RAPID TRANSIT
GAZELLE
ORO BELLE
Barful
FAT JACK
LANE MOUNTAIN
EL 7205
COPPER BASIN
Copper Creek
Copper Basin
Lane
ROCK HILL
EL 4255
Packer
Windy Saddle
Shortys
Slate Creek
230 KV TRANSMISSION LINE
EL PASO NATURAL GAS CO PIPELINE
INTERCHANGE
EXIT 252
MP 250
MP 245
BLACK CANYON INTERCHANGE
EXIT 244
ROCK SPRINGS INTERCHANGE
EXIT 242
BUMBLE BEE INTERCHANGE
EXIT 248
17
529
MINERAL POTENTIAL AREAS MAP 3-6
GRAPEVINE WASH 2-14
SOUTH BRADSHAWS EAST 2-84A
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT

RECREATION USES

This WSA, although scenic and pristine, is very small and contains only a limited number of recreation opportunities. Nonmotorized use is incident to the use of surrounding National Park Service lands which border this WSA on three sides. The immediately surrounding terrain is topographically imposing, and offers excellent opportunities for nonmotorized type recreational activities.

There are no vehicle ways located in this WSA. Although so named, this unit does not include any segments of Grapevine Wash, a broad, sandy, vehicle-accessible drainage way which receives a considerable amount of regular vehicle use. Present nonmotorized use in this WSA is 10 VDY, with no motorized use.

WILDLIFE VALUES

Mohave desert shrub with associated riparian habitats is the dominant habitat type in this WSA. Ten of the 230 vertebrate species are special- status species (Table 3-2). See the Cerbat Mountain Planning Unit URA for a detailed species list and life history information (BLM, 1972).

The entire WSA of 2,200 acres is considered crucial desert bighorn sheep habitat (Map 3-7). This area is used seasonally by at least three bighorn (Table 3-3). Crucial habitats or population numbers for the other nine special-status species are unknown.

CULTURAL RESOURCES

The known cultural resources are two large roasting pit sites, probably eligible for the *National Register of Historic Places*. The sites have potential for future research and developments as tourist attractions in the Meadview area. These particular pits appear to be very old and may represent some of the earliest examples of large roasting pits which were used by the Paiute Indians in historic times.

LAND USES

The WSA has 2,200 acres of public land with no nonfederal holdings. The northern boundary and a portion of the western boundary of the unit are formed by the Lake Mead National Recreation Area.

VEGETATION

The vegetation of this area is characteristic of the yucca-blackbrush association (Brown et al. 1979) of the Mohave desert-scrub formation. No formal botanical inventories have been conducted in this area. However, limestone milk vetch (Table 3-4) has been found within one mile of the WSA and much of this area is suitable habitat.

GRAND WASH CLIFFS WSA
(AZ-020-15) 12,176 acres

WILDERNESS VALUES

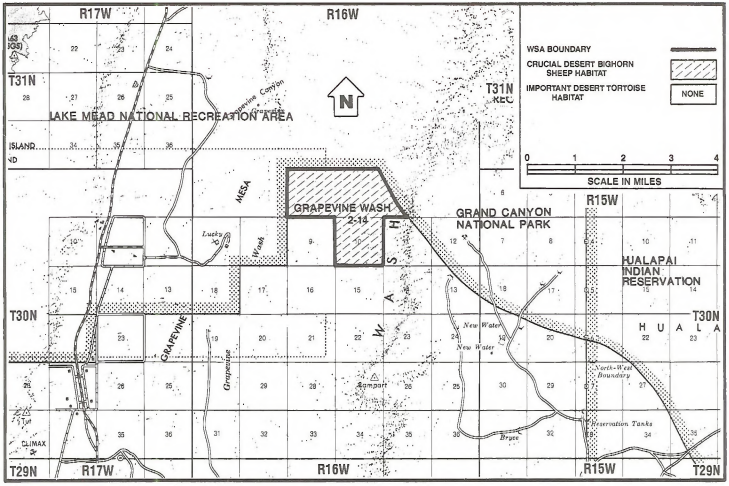
Location and Boundaries. The Grand Wash Cliffs WSA is about 40 miles north of Kingman, Arizona. The WSA is a four-mile-long portion of the Grand Wash cliffs, approximately six square miles of rolling hills above the cliffs and five square miles of the desert plain of Hualapai Valley. The unit is roughly six by three miles in size. The boundary of the unit if formed by a 500 kV powerline to the south, the Devil's Canyon Road to the west and the Hualapai Indian Reservation in the northeast.

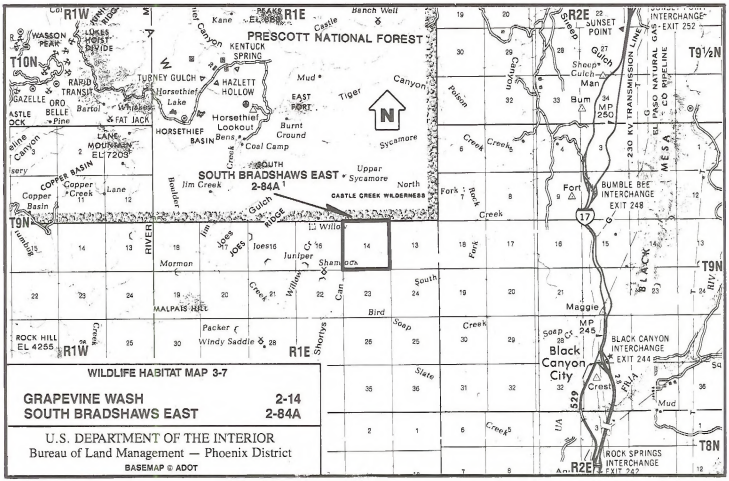
Naturalness. The Grand Wash Cliffs WSA is dominated by the immense south facing cliffs which diagonally crosses the unit from the east to the northwest. The cliffs provide a dramatic transition from the hilly forest land on the top to the desert plain of Hualapai Valley, 3,000 feet below. The cliff is granite gneiss and partially metamorphosed sedimentary rock. It displays sheer drops, spires, fault crevices and vertical chutes. A bench interrupts the vertical drop along a portion of the cliff and in one place provides a flat, nearly inaccessible plateau 1,000 feet below the cliff edge and 2,000 feet above the desert.

The western portion of the WSA consists of a series of hills forming a ridge which descends out onto the desert floor in a southeastward curl, forming a small valley between it and the base of the cliffs. Vegetation is that of a typical desert shrub community, dominated by creosote bush. At the top of the WSA, above the cliffs, are rolling hills and drainages thickly vegetated with pinyon pine, juniper and holly-grape oak. A natural fire burned portions of this forested area and revegetation thus far has been limited to grasses and shrub species.

Within this WSA human imprints are insignificant, leaving the area in a primarily natural condition. These imprints are two vehicle ways (3.5 miles), 6.5 miles of barbed wire fence, a developed livestock water spring with a drinking trough and a large water storage tank, and a livestock reservoir equipped with a metal apron catchment, 80,000-gallon water storage tank, trough and an exclosure fence. Also, a wildlife water development (metal apron catchment), equipped with a water storage tank, drinking trough and exclosure fence, is designed to blend into its surroundings and has but a minimal impact on the WSA's naturalness.

Solitude. The Grand Wash Cliffs WSA offers opportunities for solitude. The variation of topography, combined with the presence of thick vegetation over one-third of the unit enables a user to avoid the sights and sounds of others. The cliff face itself provides many chutes, crevices and steep canyons dropping onto the desert floor. The view from the top of the cliff engenders feelings of isolation and expansiveness. From these high points one has an unobstructed view out over the Hualapai Valley to the south and the Grand Canyon to the north. The rolling hill country on the top of the cliff is thickly vegetated with pinyon pine, juniper and various shrub species. Vegetative screening, combined with the configuration of rolling hills and





WILDLIFE HABITAT MAP 3-7

GRAPEVINE WASH 2-14
SOUTH BRADSHAWS EAST 2-84A

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District

BASEMAP © ADOT

drainages, insures the hiker or horseback rider in this vicinity opportunities for solitude.

Hells Canyon, which drops out of the high country in the northwest portion of the unit, offers opportunities for isolation. This drainage drops gently for its first two miles and then steeply down the cliff and onto the desert floor. Hells Creek flows during the wet portions of the year, creating an inviting attraction for exploration in an isolated and enclosed setting. The portion of the study unit on the desert floor offers less than outstanding opportunities for solitude. However, the area is well vegetated with creosote and some screening is present.

Primitive and Unconfined Recreation. The Grand Wash Cliffs WSA offers opportunities for primitive and unconfined recreation. The cliff itself provides a diversity of recreational opportunities. An attraction visible 45 miles across the Hualapai Valley, the cliffs, with their intriguing formations and visual beauty, inspire sightseeing and photography. The view from the top offers expansive views. The Hualapai Mountains, 45 miles away, are clear on the horizon. Twelve miles to the east, a continuation of the Grand Wash Cliffs rises to an impressive peak of 6,760 feet. To the north, portions of the Grand Canyon are visible.

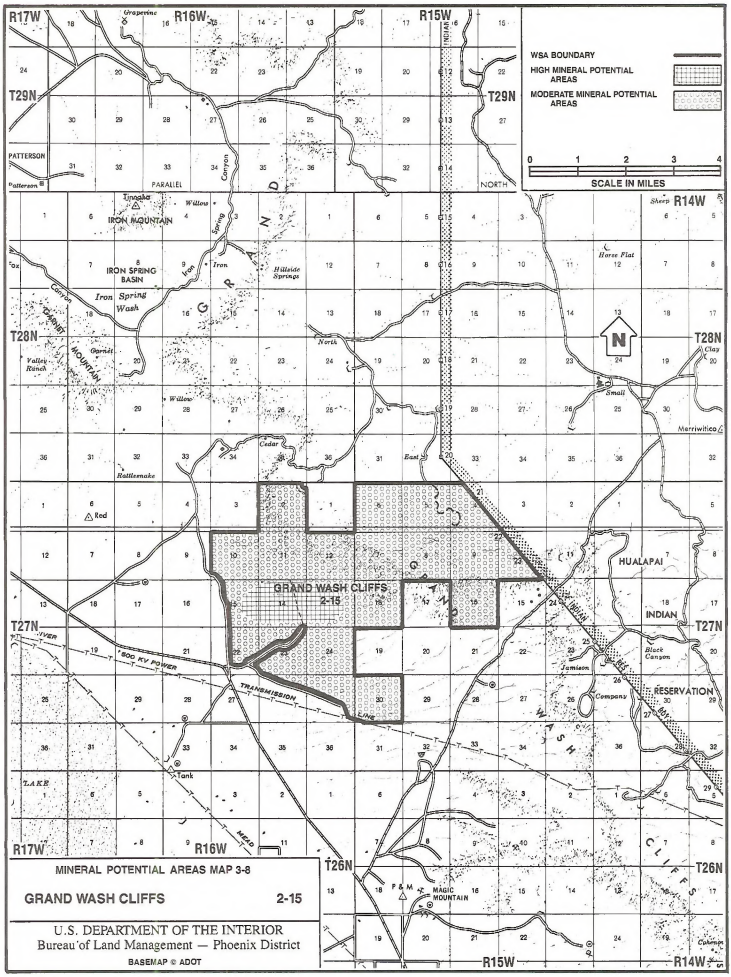
The WSA offers hiking opportunities. The cliff rim is easily accessible from the north and is well suited for day hikes. Hells Creek flows out of the high country in a steep rocky canyon that invites exploration. When the creek is flowing, myriad small waterfalls and pools are formed.

Special Features. The scenic beauty of the Grand Wash Cliffs is a significant supplemental value. The cliffs, rising 3,000 feet from the desert floor, are visible from Kingman, 40 miles away. Close up viewing reveals a complex cliff face that includes vertical chutes, spires, fault crevasses and breathtaking sheer drops. The rock in this cliff face is primarily a granitic gneiss mixed with some metamorphised sedimentaries. The formation takes on orange and pink hues with changing light.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, there were no mining claims but there is evidence of some historical mining, exploration and active exploration. The Bureau currently has no plans on file, but sampling and mapping projects have taken place which do not require plans. Highly mineralized quartz veins have been mined four miles south of the WSA. The strike of these veins is approximately North 50° West and dips to the northeast. There is no indication the system does not extend into the WSA and geologic inference suggests that it does enter near the southwest boundary and dips northeast under it. See Map 3-8 and Table 3-1 for high and moderate mineral potential.

Grand Wash Cliffs escarpment - Grand Wash Cliffs WSA.


WSA BOUNDARY
HIGH MINERAL POTENTIAL AREAS
MODERATE MINERAL POTENTIAL AREAS
0 1 2 3 4
SCALE IN MILES
R17W
R16W
R15W
R14W
T29N
T28N
T27N
T26N
GRAND WASH CLIFFS
2-15
IRON MOUNTAIN
IRON SPRING BASIN
Iron Spring Wash
HUALAPAI
INDIAN
RESERVATION
500 KV POWER
TRANSMISSION
LINE
MAGIC MOUNTAIN
P & M
Tank
Jamison
Compana
Black Canyon
Marriwhico
Horse Flat
Hillside Springs
Rattlesnake
Valley Ranch
Garnet
Red
Small
Clay
Cedar
East
North
Willow
Iron
Tinaka
Grapevine
Patterson
PARALLEL
NORTH
INDIAN
MERIDIAN
Canyon
Spring
Sherz
Fox
Cottonwood
MOUNTAIN
LAKE
MEAD
Campo
MINERAL POTENTIAL AREAS MAP 3-8
GRAND WASH CLIFFS 2-15
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © ADOT

The Grand Wash Cliffs WSA is considered to have zero to low potential for oil and gas, with low potential for geothermal. No known leasable minerals are in the WSA.

RECREATION USES

This WSA is currently attracting a very small amount of nonmotorized users. Good opportunities for day hiking, photography, and limited overnight backpacking do exist. Poor vehicle accessibility into much of the WSA, however, limits both nonmotorized and motorized recreational use in this area.

The WSA contains two separate vehicle ways totalling 3.5 miles in length, both of which access small livestock/wildlife water developments. These routes receive only a minimal amount of use; most of the recreational use is for hunter access. Present nonmotorized use is 30 VDY, motorized use is 80 VDY.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type in the western portion of the unit. The eastern upper elevations support a pinyon-juniper community. Seventeen of about 230 vertebrate species are special-status species (Table 3-2). See the Cerbat Mountain Planning Unit URA for a detailed species lists and life history information (BLM 1972).

There are about 4,480 acres of suitable peregrine falcon habitat in this WSA (Table 3-3). Crucial habitats or population numbers for this species and the 16 other special-status species are unknown.

CULTURAL RESOURCES

Although no sites are known in this WSA, this is likely a result of the low level of completed inventory. Areas adjacent to the WSA suggest that at least five sites are present that are potentially eligible for the *National Register of Historic Places*. These sites are probably two large roasting pits, two prehistoric campsites and a prehistoric rock shelter.

LAND USES

The WSA contains 12,176 acres of public land, including 4,480 acres of privately owned mineral estate. A small part of the southern boundary of the unit is formed by a power transmission line operated by Arizona Public Service Company within a 200-foot R/W (AR-035604). The eastern boundary of the unit is formed by the Hualapai Indian Reservation.

LIVESTOCK AND RANGELAND USES

Portions of two grazing allotments lie within the WSA—Clay Springs (12%, about 60 AUMs out of 520) and Upper Music (31%, about 800 AUMs out of 2,580). An allotment management plan has been developed for Upper Music.

VEGETATION

The vegetation in this WSA includes associations of both the Mohave desertscrub and the great basin conifer woodland formations (Brown et al. 1979). The former is found in the low areas and canyons below the cliffs while the latter, dominated by the pinyon-juniper association, is on the mesa above the cliffs. Although no formal botanical inventory has been conducted in this unit, limestone milk vetch (Table 3-4) grows in the vicinity and suitable habitat occurs over much of the WSA. This species is found in limestone outcrops and on limey soils.

MOUNT DAVIS WSA
(AZ-020-21) 2,560 acres

WILDERNESS VALUES

Location and Boundaries. Mount Davis WSA is in northwest Arizona 20 miles north of Davis Dam. The unit consists of four isolated sections adjacent to the Lake Mead National Recreation Area (LMNRA) wilderness proposal (*Preliminary Wilderness Proposal*, Lake Mead, USDI, NPS, January 1979, and LMNRA Draft EIS, NPS, April 1985). Each of the four parcels are 640 acres. The combined area within this unit is 2,560 acres of BLM-administered public land with no state or private inholdings. Although the unit is under 5,000 acres, it meets the size criteria in that all four parcels are adjacent to another federal agency's endorsed wilderness proposal.

Naturalness. Mount Davis WSA consists of small portions of the outwash plain which drains the west slope of the Black Mountains. Major washes drain directly into the Colorado River which is one and one-half to four miles west of these areas. Small rugged volcanic hills are in three of the four sections, and the other section is much of the western slope of 2,034 foot Mount Davis. These hills are primarily the remnants of thick volcanic flows which have been heavily croded into small peaks, buttes, and ridges, with several small, but steep-walled canyons and gorges.

Vegetation within the WSA is a very sparse creosote-bursage community with white burrobush, ephedra, wolfberry, snakeweed and buckwheat. Cat claw acacia and some mesquite grow along the washes. The topography and vegetation of these four sections are a natural continuation of the Lake Mead National Recreation Area.

Three of these four sections have remained free of disturbance and appear to have been affected entirely by the forces of nature. The section encompassing the east side of Mount Davis contains a metal apron water catchment with a buried water storage tank, drinking troughs and a barbed wire exclosure fence for the bighorn sheep which inhabit this area.

Solitude. The topographic relief within these parcels is generally sufficient to provide opportunities for solitude. However, since each parcel is only 640 acres, opportunities are severely

restricted by size and cannot be said to be outstanding. Therefore, these parcels, by themselves, would not provide an outstanding opportunity for solitude. However, when considered with the adjacent Lake Mead National Recreation Area wilderness proposal, opportunities in the combined area are outstanding, and provide a large, wild area with excellent topographic relief and complexity.

Primitive And Unconfined Recreation. Opportunities for primitive and unconfined recreation within the WSA are limited by the unit's small size. Each parcel is separated from the next by private land and connected to one another only by the Lake Mead National Recreation Area. Opportunities for hiking are outstanding only when the contiguous Recreation Area wilderness proposal is considered. Within the unit the form of recreation with the most potential is the opportunity for zoological sightseeing. Desert bighorn sheep live within the WSA and the area is considered as medium value habitat.

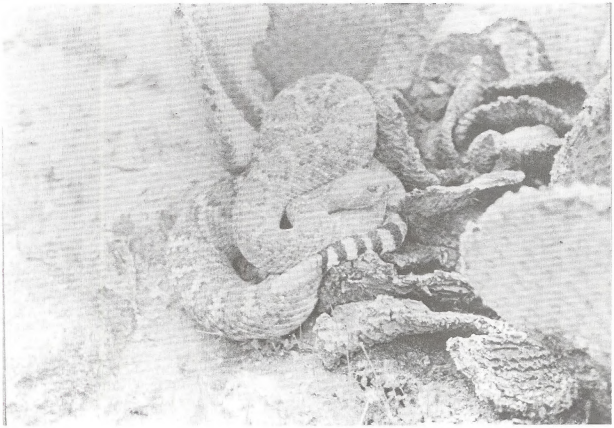
Special Features. At least three state-listed "Threatened and Unique Wildlife of Arizona" species (or subspecies) live within the inventory unit. The desert tortoise and desert bighorn sheep are in Group III whose status in Arizona may be in jeopardy in the foreseeable future; the desert tortoise and the gila monster are federal candidate species.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, four placer and lode mining claims covered all of section 30, T. 26 N., R. 21 W., G&SRM. Historical mining and exploration and active exploration exists within the 2,560 acres of this WSA. No mining plans are on file with the Bureau, but sampling and mapping projects are presently under way which do not require plans.

The vertical oriented quartz veins associated with a mineralized zone near the foot wall of a detachment fault coincide with the boundary between Tertiary volcanic and Precambrian granite. Various types of faults, including detachment faults, and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south and has produced gold and silver, with minor lead and zinc. A north/south band within the WSA has high potential for gold and silver mineral development. See Map 3-1 and Table 3-1 for high and moderate mineral potential.

The Mount Davis WSA is considered to have zero potential for oil and gas, with low potential for geothermal. No known leasable minerals are in the WSA.



"Coontail" Western Diamondback Rattlesnake.

RECREATION USES

This WSA is notable for its remoteness and difficulty of access. A portion of this unit is on the east side of Mount Davis, a steep, dark colored hill isolated in the midst of a vast alluvial plain. This area attracts some of the potential day hikers recreating on nearby Lake Mohave. The narrow drainages are not accessible to motor vehicles so there are no vehicle ways and no nonmotorized use. Present nonmotorized use in this WSA is 30 VDY.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type. This area supports approximately 230 vertebrate species of which 19 are special-status (Table 3-2). See the Black Mountains URA for detailed species lists and life history information (BLM, 1977).

This area has 2,460 acres of crucial bighorn sheep habitat and is almost one-half of the Mt. Davis lambing grounds so important to the Black Mountains desert bighorn sheep population. This WSA with up to ten bighorn sheep is contiguous to the Lake Mead National Recreation Area which supports high densities of sheep. See Table 3-3 and Map 3-2.

Suitable habitat for the desert tortoise and Gila monster exists throughout the area, and for the Gilbert's skink is found in dry and wet canyons in association with turbinella oak. Ferruginous and Swainson's hawks are expected along the eastern fringes of the WSA, coming in from nearby Sacramento Valley. Crucial habitats or population numbers for these five species are unknown. Population numbers and ranges of the 13 other special-status species are not known.

CULTURAL RESOURCES

Although no sites are known in this WSA, this is likely a result of the low level of completed inventory. Areas adjacent to the WSA suggest that at least three sites are potentially eligible for the *National Register of Historic Places*. These sites are probably two prehistoric campsites and a prehistoric rock shelter.

LAND USES

The WSA contains 2,560 acres of public land, with no nonfederal holdings. Portions of the northern and western boundaries are formed by the Lake Mead National Recreation Area.

VEGETATION

The vegetation of this area is characteristic of the creosote bush-yucca association (Brown et al. 1979) of the Mohave desertscrub formation. No formal botanical inventories have been conducted in this area; however, there is suitable habitat for desert cassia and horsebrush (Table 3-4).

MOUNT NUTT WSA
(AZ-020-24) 29,190 acres

WILDERNESS VALUES

Location and Boundaries. Mount Nutt WSA is 15 miles west of Kingman and nine miles east of Bullhead City. The WSA is bounded on the north by a combination of state and private land and portions of the Secret Pass Canyon vehicle way, and by a 500 kV powerline and access road. The east boundary is private land and two short segments of road. The south boundary follows state and private land and a pipeline and access road. The west boundary follows two segments of vehicle ways and a road.

Naturalness. The Mount Nutt WSA encompasses an eight-mile-long stretch of the Black Mountains, a long, narrow, north-south trending volcanic range typical of the mountain ranges within the basin and range physiographic province. The unit rises nearly 2,500 feet from the western desert floor to the summits of Nutt Mountain (5,216 feet) and Mount Nutt (5,062 feet).

The mountains are a variety of volcanics dominated by Tertiary (and some Cretaceous) rhyolite and andesite with tuff and agglomerates. Some Laramide granites are exposed in the west-central portion of the unit and Precambrian gneiss in the north-central portion of the unit. The mountains are formed primarily of a thick volcanic flow highly dissected so that the landscape features a variety of mesas and buttes. The area is well known locally for its dramatic brightly colored terrain with picturesque pinnacles, spires, deep canyons, precipitous cliff faces and numerous caves, with "slickrock" surfaces being common.

The vegetation is Mohave desertscrub in the lower elevations with a grassland formation at the higher elevations. The former appears primarily as either a creosote-bursage community, or as blackbrush communities with Mohave yucca as a dominant. The upper elevations support a juniper grassland formation (Upper Sonoran grassland) characterized by California juniper, nolina, blue yucca, snakeweed and a variety of grasses with some shrub live oak. Numerous springs are throughout the unit, many of which support cottonwood-willow communities. The WSA is in natural condition, clearly dominated by the forces of nature.

The human-caused imprints are substantially unnoticeable and do not significantly impact the unit's naturalness: a total of 2.8 miles of fence lines and three springs developed primarily for livestock use, 2.3 miles of water pipeline extending from these springs to the WSA boundaries and beyond and several wildlife water developments (five developed springs and four masonry rock dam/pothole catchments). These facilities were blended into their surroundings, and therefore have but a minimal impact on the WSA's naturalness.

The Oatman water pipeline runs from Flag Spring down Cottonwood Wash, 2.5 miles in the WSA. About one mile follows a vehicle way up the wash (see Map 2-8).

A 2.5-mile segment of a coal slurry pipeline (buried) extends through the northernmost portion of the WSA. Because of extensive blasting and access development during its construction,

the route of the pipeline is much in evidence along its entire length within the WSA. A 2.5-mile vehicle way follows the pipeline (see Map 2-8).

Most of the 12.5 miles of vehicle ways follow washes with no construction or maintenance apparent, and are often barely discernible from the ground. Several very old and scattered mining prospects and shafts as well as some reclaimed areas of recent mining activity are along the northern boundary. The rugged topography and adequate vegetation sufficiently screen these imprints so as to render them substantially unnoticeable.

Solitude. Outstanding opportunities for solitude are present throughout the Mount Nutt WSA. Nearly all of the unit is the rugged Black Mountains which present a complex system of mesas, buttes, canyons, valleys and gorges with innumerable opportunities for the visitor to escape the sights and sounds of other visitors. The WSA averages seven miles in length and five and one-half miles in width and exhibits a substantial elevational change. The topography is such that the unit could absorb numerous visitors before the opportunity for solitude would be compromised.

There is no one area to which visitors would tend to congregate. Rather, a variety of features serve to naturally disperse visitors and reduce the chances of encounters with other visitors. In addition, the numerous canyons and small valleys within the WSA also provide opportunities for solitude. The rocky, hilly nature of the terrain combined with the often dense vegetation, provides more than adequate screening.

Primitive and Unconfined Recreation. The Mount Nutt WSA provides outstanding opportunities for primitive recreation, such as hiking, backpacking, sightseeing for geological and zoological sights and photography. The variety available to the hiker further enhances the opportunities. The many cross-country routes are greatly varied in length and difficulty, providing a spectrum of challenge. Scenic views and picturesque features reward the visitor throughout the WSA.

The WSA also provides excellent opportunities for geologic sightseeing because of the variety of landforms and the variety of volcanic rocks. Andesite, rhyolite, tuffs and agglomerates form scenic mesas, buttes, spires, windows and other impressive rock features. The WSA also provides outstanding opportunities for zoologic sightseeing—a variety of wildlife is relatively abundant. Nearly the entire WSA is classified as critical bighorn sheep habitat due to its importance as a lambing area and its healthy population of bighorn sheep. All these provide outstanding opportunities for photography. Numerous precipitous cliffs provide ample opportunity for the rock climber; however, the volcanic rock is fairly crumbly, reducing the opportunities for technical climbing.

Hiker strolls through canyon - Mount Nutt WSA.

Special Features. Mount Nutt WSA has notable scenic values that supplement the wilderness experience with a rugged terrain and a variety of colors and textures.

The WSA supports a healthy herd of desert bighorn sheep, a state-listed Group III whose status in Arizona may be in jeopardy in the foreseeable future.

Some important archaeological resources (rock shelters, pictographs and petroglyphs) are probably eligible for the *National Register of Historic Places*. One of the rock shelters is the Bighorn Cave which has recently (1986) been tested by Northern Arizona University and the Museum of Northern Arizona. Bighorn Cave was occupied several times during the past four thousand years and the artifacts found within the cave are well preserved. Bighorn Cave has great potential for future excavations to reveal the way people lived in northwestern Arizona in prehistoric times. The pictographs are painted in various shades of red, black and white, and are some of the best examples of painted prehistoric designs found anywhere in Arizona.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, there were 635 placer and lode mining claims as well as historical mining and exploration and active exploration. Three open mining plans are on file with the Bureau; three closed files and numerous sampling and mapping exploration projects are presently under way which do not require a plan. The minerals estate on 4,161 acres on nineteen parcels and 589 acres of surface and mineral estate on six parcels within the WSA are privately owned.

Gold and silver has been produced from nearly vertical quartz-adularia epithermal veins cutting through in the upper Tertiary volcanic units. These units are recognized outside the WSA and cherrystemmed into the WSA at the most extensive workings.

Various types of faults, including detachment faults and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south and has produced gold, silver, with minor lead and zinc. High grade mordenite and clinoptilolite zeolite deposits are found at several localities in the Black Mountains including Mount Nutt WSA.

Geological inference suggests that zeolites should be present in the same altered units throughout the WSA. The zeolites at the north and south ends of the WSA resulted from the alteration of the overlying clastic vitric Tertiary age volcanic tuffs. The zone of recognized zeolites ranges from the north end of Black Mountain North WSA to central Warm Spring WSA on the south. Underlying the zeolite unit is a north/south band of high potential for gold and silver mineral development. A rare semi-precious gem, fire agate, is also found in certain units within the upper Tertiary volcanics in the central and northern areas of the WSA. See Map 3-9 and Table 3-1 for high and moderate mineral potential.

The Mount Nutt WSA is considered to have zero potential for oil and gas and low potential for geothermal. No known leasable minerals are in the WSA.

RECREATION USES

This large and topographically complex WSA provides a range of high quality opportunities for users seeking primitive and unconfined types of recreation. Nonmotorized users in this WSA participate in day hiking, wildlife and wildflower photography, rock climbing, rockhounding and extended overnight backpacking. This WSA is becoming an especially popular destination for organized educational and outings-type groups because of its proximity to population centers, its accessibility and its considerable variety of terrain features. The WSA is easily accessible from numerous points along its north, east and south boundaries, and is attracting an increasing number of nonmotorized users as its attractions become better known. This WSA is midway between Kingman and Bullhead City and the community of Golden Valley is rapidly expanding into the Sacramento Valley on the northeast.

About 14.5 miles of vehicle ways enter the WSA from several points along its west, north and east sides. Three of these vehicle ways bisect small portions of the WSA: two extend through Secret Pass Canyon (portions of which are on both sides of the WSA's north end) and the other parallels the 2.5-mile segment of buried coal slurry line in the extreme northwestern part. All of these ways receive regular vehicle use by recreational 4-wheelers and other motorized users. All of the other vehicle ways consist of short, generally deteriorated spur trails which dead-end in steep box canyon drainages on the periphery of the WSA. These trails invariably access old mine prospects or spring sites but do receive a small but steady year-round usage. Many serve as vehicle parking sites for hunters, hikers, rockhounds, picnickers or for overnight car camping.

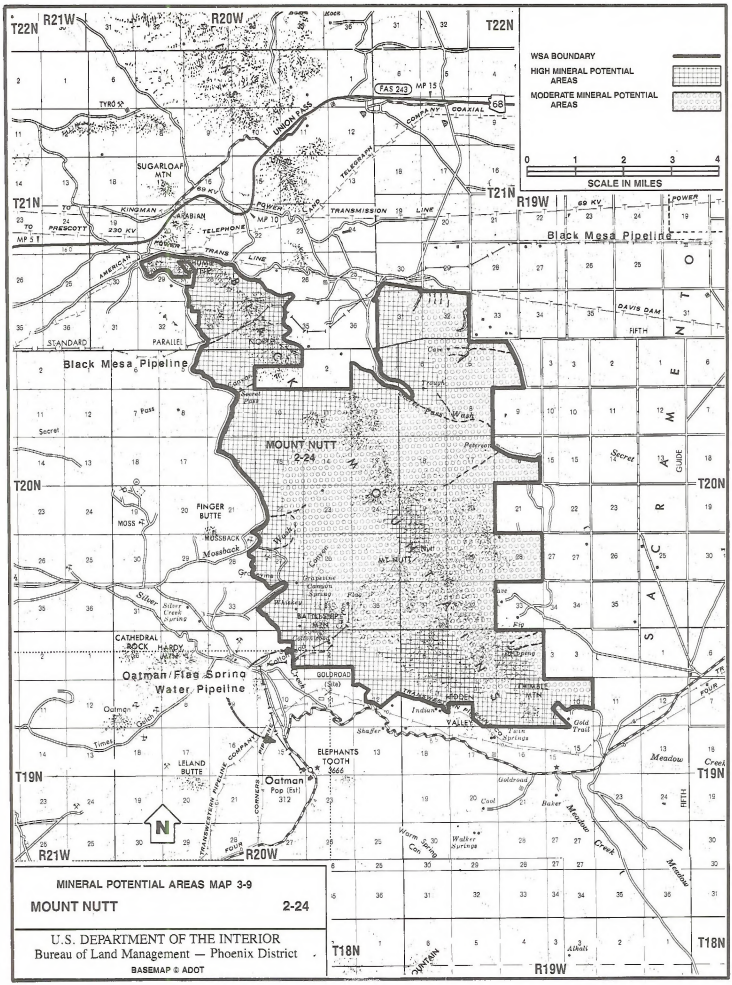
Present nonmotorized use in this WSA is 1,800 VDY, motorized use is 1,200 VDY.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type throughout the unit. This area supports about 230 vertebrate species of which 20 are special-status species (Table 3-2). See the Black Mountains URA for detailed species lists and life history information (BLM 1977).

This area is also extremely important to the Black Mountains desert bighorn sheep population with its 22,960 acres of crucial bighorn sheep habitat (Table 3-3 and Map 3-10) and 8,000 acres of the 8,480 acres Mount Nutt lambing grounds. There are up to 100 bighorn sheep within the WSA.

Suitable peregrine falcon habitat in the area totals 25,920 acres. Suitable habitat for the desert tortoise and Gila monster exists throughout the area and Gilbert's skink is found in dry and wet canyons in association with turbinella oak. Ferruginous and Swainson's hawks are expected along the eastern fringes of the WSA, coming in from nearby Sacramento Valley. An endemic snail known as Goldroad Fonticellia is known to live at several spring sites within the WSA. Crucial habitats or population numbers for these three species are unknown, as are population numbers and ranges of the 13 other special-status species.

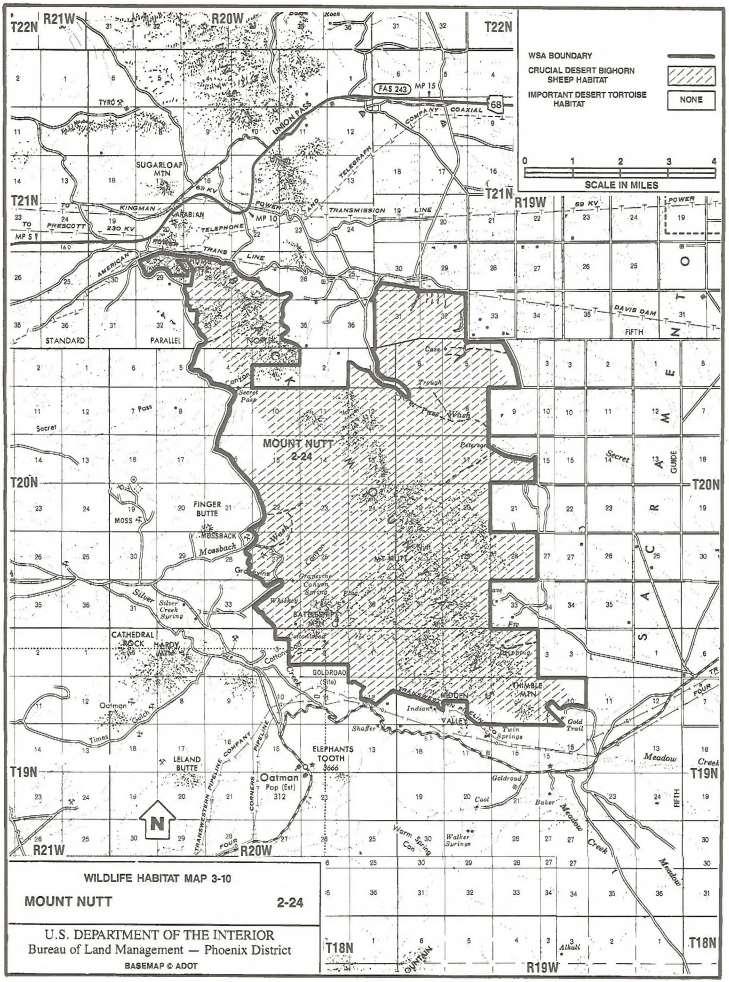


MINERAL POTENTIAL AREAS MAP 3-9

MOUNT NUTT 2-24

U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District

BASEMAP © ADOT


WSA BOUNDARY
CRUCIAL DESERT BIGHORN SHEEP HABITAT
IMPORTANT DESERT TORTOISE HABITAT
NONE
0 1 2 3 4
SCALE IN MILES
T22N
R21W
R20W
T21N
R19W
T20N
T19N
T18N
MOUNT NUTT
2-24
SUGARLOAP MTN
STANDARD
PARALLEL
FINGER BUTTE
MOSS
MOSSBACK
CATHEDRAL ROCK
HARDY MTN
LELAND BUTTE
ELEPHANTS TOOTH
Oatman
GOLDROAD
THIMBLE MTN
YALLER
Twin Springs
Walker Springs
Warm Spring
Meadow Creek
Meadow
Gold Trail
Indian
Shafer
Cool
Baker
Alkali
Secret
Secret Pass
Silver Creek Spring
Cottonwood
Timber
Gold
Pass
Trail
Canyon
Wash
Creek
Gap
Mt NUTT
Wagoner Canyon Spring
BATTLESHIP MTN
Mesquite
Fork
Fifth
Sixth
Seventh
Eighth
Ninth
Tenth
Eleventh
Twelfth
Thirteenth
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Seventeenth
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Twenty
Twenty-First
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Twenty-Third
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Eighty-Seventh
Eighty-Eighth
Eighty-Ninth
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Ninety-Third
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Ninety-Fifth
Ninety-Sixth
Ninety-Seventh
Ninety-Eighth
Ninety-Ninth
One Hundred
One Hundred-First
One Hundred-Second
One Hundred-Third
One Hundred-Fourth
One Hundred-Fifth
One Hundred-Sixth
One Hundred-Seventh
One Hundred-Eighth
One Hundred-Ninth
One Hundred-Tenth
One Hundred-Eleventh
One Hundred-Twelfth
One Hundred-Thirteenth
One Hundred-Fourteenth
One Hundred-Fifteenth
One Hundred-Sixteen

CULTURAL RESOURCES

The known cultural resources consist of six sites probably eligible for the *National Register of Historic Places*. These sites are rock shelters, pictographs and petroglyphs. One of the rock shelters is the Bighorn Cave which has recently (1986) been tested by Northern Arizona University and the Museum of Northern Arizona. Bighorn Cave was occupied several times during the past four thousand years and the artifacts found within the cave are in an excellent state of preservation. Bighorn Cave has great potential for future excavations to reveal ways people lived in northwestern Arizona in prehistoric times.

The pictographs are in various shades of red, black and white and are important because they are some of the best examples of painted prehistoric designs found anywhere in Arizona.

LIVESTOCK AND RANGELAND USES

Portions of three grazing allotments are within the WSA: Thumb Butte (9%), Silver Creek (13%) and Black Mountain (29%). Thumb Butte and Silver Creek are designated ephemeral. An allotment management plan has been developed for Black Mountain. Approximately 240 AUMs of use are associated with the area (total use of controlled lands equals 1,248 AUMs).

WILD HORSE AND BURRO PROGRAM

Burros live throughout the area, but highest population densities are in the canyons and on the east and west slopes of the major ridge. A population of 100-125 burros are dependent on many springs throughout the area. About 10-15 white burros and 5-10 paint burros are maintained on the west slope from Thumb Butte to Silver Creek on the south. White and paint burros are uncommon in the wild, so interest and protection in this area is more intense than other areas within the Black Mountain Herd Management Area.

Excess wild burros are captured on a regular basis and includes roping and wingtrapping (helicopter and motor vehicles), and haytrapping (motor vehicles and temporary corrals). Because of the rugged terrain, most capture efforts are limited to the outer fringes with the exception of low level helicopter flights to drive the burros from the interior.

To prevent overuse by burros, vegetative monitoring plots at Thumb Butte, Secret Pass, Grapevine Canyon, Cottonwood Canyon and Cave Spring are read annually. Access along existing roadways and washes is necessary to monitor burro use at these locations. About every five years a burro population inventory occurs, using low level helicopter flights.

Thimble Butte - Mount Nutt WSA.

LAND USES

The WSA contains 29,190 acres of of public land, including 589 acres of private surface and mineral estate and 4,161 acres of private mineral estate. The northern boundary to the WSA is formed by a power transmission line (200' R/W) and road (50' R/W) operated by the Western Area Power Administration under authorization PHX-085710. A small portion of the northwest boundary of the unit is formed by a buried cable (30' R/W) and road (30' R/W) operated by American Telephone and Telegraph under authorizations AR-033355 and A-17839, respectively.

A coal slurry pipeline operated by Black Mesa Pipeline Company under authorization A-438 (50' R/W) passes through approximately 2.5 miles of the WSA in the northwest corner. Extensive blasting and earthmoving during construction of the pipeline has left the maintenance trail clearly visible in the WSA. The pipeline is buried and generally unobtrusive except for marking signs and valve access points protected by above ground corrugated metal pipe and manhole covers.

Citizens Utilities 100-foot R/W PHX-034352 for a power transmission line intersects and passes through portions of the western edge of the WSA. The line has been abandoned and R/W relinquished.

The southern boundary of the WSA is formed by a natural gas pipeline operated by Transwestern Pipeline Company within a 50-foot R/W (AR-023662). Citizens Utilities Company 100-foot R/W (A-14911) for a 69 kV powerline also forms a small portion (½-mile) of the southern boundary. Four Corners Pipeline Company crude oil pipeline (50' R/W AR-017080) also runs along the southern boundary to the WSA.

A small 5-foot-wide Guying R/W (A-16822, Citizens Utility Company) intrudes a short distance into the northeast corner of the WSA.

A 2.5-inch white PVC pipe runs from Flag Springs within the WSA down Cottonwood Canyon to Oatman (2.5 miles in the WSA). The pipe is the sole water source for the town of Oatman. There is no record of a right-of-way for the line on public land or the recently conveyed state lands.

VEGETATION

The vegetation in this WSA includes associations of both the Mohave desertscrub and the great basin conifer woodland formations (Brown et al. 1979). Creosote bush-white bursage, creosote bush-yucca, blackbrush and *Salazaria*-mixed shrub associations dominate the area. The higher elevations around Mount Nutt support a juniper-mixed grass-mixed shrub association. A few saguaro cacti grow in the southwestern portion of the unit. Several spring communities exist within the WSA. A variety of riparian vegetations is at these springs and in the adjacent washes and canyons. These associations include cottonwood-willow, juncus-monkey flower, and submergent aquatic communities. Of special interest is the iris "blue-eyed grass" (*Sicyrinchium demissum* Greene).

Although no formal botanical inventories have been conducted in this area, linear leaf rabbit brush (Table 3-4) is found east of Sitgreaves Pass in the southwest corner of the WSA. Suitable habitat for this species is on the western boundary of the unit. This same area provides suitable habitat for desert cassia and horsebrush (Table 3-4).

Portions of five sections of the eastern boundary of the WSA are suitable for yucca harvesting (see the vegetation narrative for the Mount Tipton WSA).

WARM SPRINGS WSA
(AZ-020-28/29) 114,800 acres

WILDERNESS VALUES

Location and Boundaries. The Warm Springs WSA lies 20 miles southwest of Kingman and is bordered by the towns of Oatman to the northwest, Yucca to the east and by private land along the northeast and southern boundaries. The western boundary is partly the Davis Dam-Parker Dam 230 kV power transmission line and partly the old U.S. 66 highway. A portion of the east boundary follows the old Atchison-Topeka and Santa Fe Railroad grade north to the town of Yucca.

Naturalness. The Warm Springs WSA has a complex topography supporting a variety of plant and animal communities and is predominantly natural with human imprints substantially unnoticable. The unit can be divided into several different land forms.

The first of these is the 10-mile-long Black Mesa which extends from the northern boundary to the south-central and is dissected by numerous canyons and side canyons. At the edge of the mesa an average drop of 800 feet isolates the upper flats from the maze of intricate canyons. Most of the side canyons average three miles in length and empty into a larger more open drainage. The most extensive of these is the Warm Springs Canyon which winds through the WSA paralleling the mesa for most of its length, eventually joining a large unnamed drainage from the east. At the junction of these two canyons lie the three small warm springs from which the major canyon derives its name.

The canyon mouth at Warm Springs opens into a wide valley bordered by mountains. This region is a complex system of steep cliffs rising to sharp peaks and ridges with numerous hidden canyons and spires—among the most colorful in the unit. Warm Spring Wash flows out of the mountains and continues across a large basalt flow which is now a long flat plain nearly impassable because of basalt boulders. To the north and west of the lava flow is an area of low rolling hills which form the western perimeter of the WSA. The northern extent of these hills is McHeffy Butte, about three miles in length and 300 feet above its surrounding terrain.

Black Mesa drops off precipitously to the east with several canyon drainages flowing out into the large alluvial valley below.

This valley is drained by a sand wash and supports a variety of plants, including thick stands of Mohave yucca. Several large drainages found in the eastern portion of the unit contains many small springs. The most prominent are Antelope Springs (a minor seep) and Alkali Spring (a small open body of water devoid of surrounding vegetation) because of high concentrations of mineral salts around the spring.

This WSA offers a fine array of the plant communities commonly found in the Mohave Desert. To the north in the slightly higher canyons, blackbrush grow in large communities with associations of Mexican bladdersage, Indian paintbrush and numerous other forbs. To the south, with lower elevation and slightly drier climate, are mesquite, palo verde, ocotillo, brittlebush, prickly pear and hedgehog. Smoke tree and catclaw are usually found in the lower drainages and the washes. Black Mesa is primarily covered with grasses and forbs, but also supports occasional stands of yucca accompanied by several species of cholla.

Minor human imprints include 48 miles of vehicle ways, 4.6 miles of fenceline, historic and some recent but minor mining developments, and several livestock and wildlife water developments. Most of the vehicle ways exhibit signs of past construction. Many are old bulldozer trails that were built to provide access to a drill hole or mineral prospect, but are now partially revegetated, usually eroded and show no sign of maintenance or regular and continuous use. Most offer very difficult passage for 4-WD vehicles and present little impact to the apparent naturalness of the unit. The remaining vehicle ways are impromptu routes developed solely by the passage of vehicles. Erosion has made vehicular use of these ways difficult.

The most common mining imprint is an occasional small mineral prospect—usually 4 to 10 feet wide and 4 to 6 feet deep. Most are partially filled with slumping side walls. The rock and dirt excavated from the hole are scattered about and partially vegetated. These prospects are not readily noticeable. Recent mining activity has been exploratory core drilling and trenching operations just south of McHeffy Butte in the west-central portion near the end of a vehicle way and 0.5 miles from the WSA boundary. Reclamation at this site was excellent, with little trace of the exploratory operations remaining.

The water developments are three spring sites improved primarily for livestock use. Portions of two buried pipelines carry water from springs within the unit to water tanks and troughs outside the unit. The only visible evidence of their presence is a slight berm that has revegetated. Three masonry dam/pothole catchments and six developed springs equipped with water troughs and exclosure fences are there but these facilities blend into the vastness of their surroundings quite well and therefore have but a minimal impact on the WSA's naturalness.

Solitude. Outstanding opportunities for solitude exist in a wide variety of settings in this WSA. A six-mile hike through rugged terrain gives access to the central core of the WSA where broad mesas drop abruptly into wide canyons more than 800 feet deep. Numerous side canyons present varied landscapes and invite exploration. The southwestern portion of the WSA is more broken with sharp peaks and large cliffs. Narrow winding canyons open into small valleys separated by steep ridges. The broken jumbled topography of this portion of the unit provides outstanding opportunities for solitude.

The southern portion of the WSA is an alluvial plain which displays notably large expanses of undisturbed desert pavement. Here a recreationist can walk for hours without encountering signs of man. Those in search of solitude can sit on the high cliffs above the plains and look out over miles of undeveloped land.

Along the eastern portion of the unit the high bluffs of the mesas stand 1,800 feet above the desert plain. They are dissected by numerous canyons that twist and turn as they travel through the mesa, to eventually form bajadas at the base of the bluffs. The wide variety of landforms and vegetation enhances opportunities for solitude. The large size of this WSA, the often dramatic scenery, and the complex topography provide the recreationist with an outstanding feeling of isolation in a land remote from the influence of humans.

Primitive And Unconfined Recreation. The Warm Springs WSA has a wide diversity of zoological and geological features offering outstanding opportunities for primitive recreation. The colorful scenery and varied topography invite exploration. Water at Warm Springs and other springs allows for extended camping trips of several days. Horseback riding and hiking are further enhanced by the presence of an old historical trail and numerous feral burro trails. These trails make walking or riding through the often rugged and broken terrain of this unit relatively easy. The large size of the WSA, combined with the diversity of topography, enables the recreationist to take long treks by foot or horseback.

The mountains adjacent to Warm Springs offer many opportunities for rock climbing. The rugged colorful terrain with a diversity of cliffs, spires and ridges provides both difficult technical climbs and easily accomplished scrambles. The abundance of wildlife offers outstanding opportunities for hunting, photography or simply observing the various species. Sightings include golden eagles, desert mule deer and bighorn sheep.

Special Features. The southern half of the WSA is reserved for wildlife and managed accordingly. The WSA supports a healthy herd of desert bighorn sheep which is a state-listed Group III whose status in Arizona may be in jeopardy in the foreseeable future. Because large portions of the WSA are lambing grounds crucial to bighorn reproduction, the WSA is crucial bighorn sheep habitat.

MINERALS AND ENERGY RESOURCES

As of August 26, 1986, there were 283 placer and lode mining claims, along with historic mining and active exploration. Currently, two open mining plans, one closed file and numerous sampling and mapping projects are on file with the Bureau. The mineral estate on 16,214 acres on 19 parcels within the WSA is privately owned.

Gold and silver has been produced from nearly vertical quartz-adularia epithermal veins cutting through in the upper Tertiary

volcanic units. These units are recognized outside the WSA and cherrystemmed into the WSA at the most extensive workings.

Various types of faults, including detachment faults, and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south and has produced gold and silver, with minor lead and zinc. High grade zeolites, mordenite and clinoptilolite are found as alteration products of the Tertiary ash flows along the western side of the Warm Spring WSA in the vicinity of McHeffy Butte and north near Oatman, AZ. Geological inference suggests that these same zeolites should be found in the same units at other locations throughout the WSA. Kaolinite is found on private and federal minerals in section 35, T. 17 N., R. 19 W., and should be expected to be present elsewhere in similar units in the WSA. Industrial grade perlite is found in section 36, T. 17 N., R. 18 W. and fire opal, a precious gem, has been found in Tertiary rhyolite flows at the north end of the WSA in section 19, T. 19 N., R. 19 W. Geological inference would suggest that perlite and fire opals should be found at other locations throughout the WSA in the same rock unit.

A north/south band within the WSA has high potential for gold and silver mineral development. A rare semi-precious gem, fire agate, is also found in certain units within the upper Tertiary volcanics in the central and northern areas of the Mount Nutt WSA to the north, and has been found in the Warm Springs WSA near the Warm Spring. See Table 3-1 and Map 3-11 for high and moderate mineral potential.

The Warm Springs WSA is considered to have a low to zero potential for oil, gas, and geothermal in the southern half of the WSA. No known leasable minerals are in the WSA.

RECREATION USES

This very large WSA provides an array of opportunities for users seeking primitive and unconfined types of recreation. The immensity and relative inaccessability of this area and its rugged terrain have, however, so far discouraged casual use here - motorized or nonmotorized. As a consequence, this area is less well known and is therefore used less than the accessible Mount Nutt WSA. Nonmotorized users can take extended overnight backpack trips during the cooler seasons. The potential for viewing and photographing desert bighorn sheep is excellent, especially during the hot and dry summer months when the sheep are concentrated near those several springs that have been developed specifically for their use.

Warm Springs WSA has 44 miles of vehicle ways which enter from several points along its perimeter. Several long cherrystemmed roads provide motorized users with access into the unit. Most of the vehicle ways within the WSA were constructed many years ago to serve as equipment access routes during brief

Black Mesa, a ten-mile lava flow, canyons, washes and flats are among the landforms found in the southern Black Mountains within the Warm Springs WSA.

MINERAL POTENTIAL AREAS MAP 3-11

WARM SPRINGS 2-28/29

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Bureau of Land Management — Phoenix District

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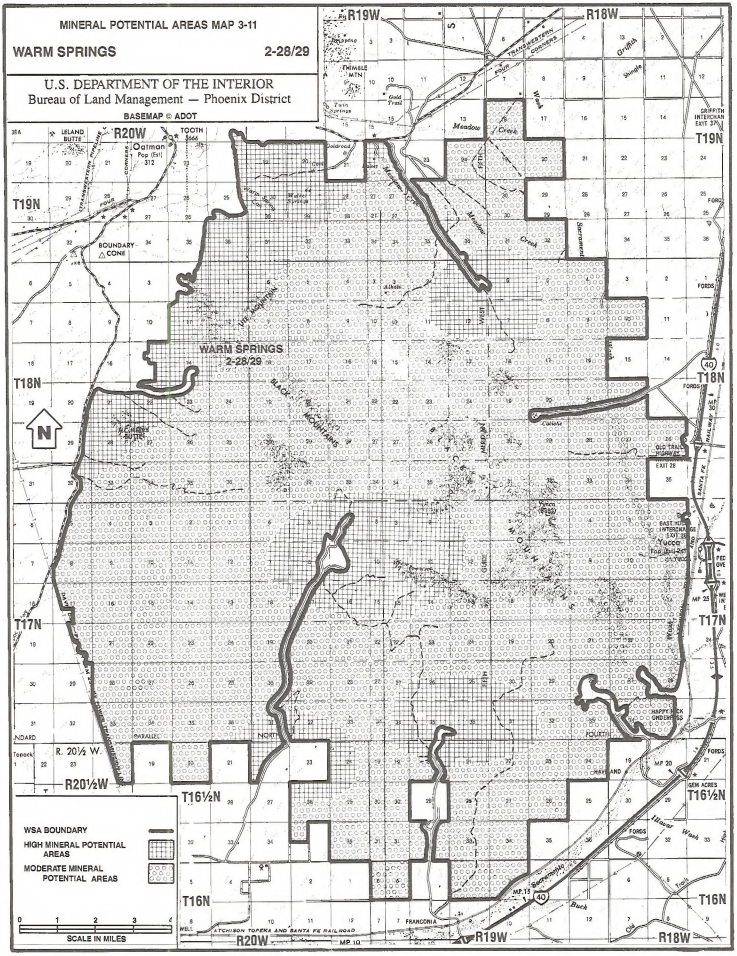

episodes of exploratory core drilling. These routes however, are maze-like, eroded, often impassable, and hold few attractions for current motorized recreational users. Most of the cherrystemmed roads and some of the vehicle ways access spring sites. These routes attract some recreational 4-wheelers, but most motorized use within the WSA is for hunting. Present nonmotorized use is 250 VDY and motorized use 600 VDY.

WILDLIFE VALUES

Mohave desert shrub with associated riparian and cliff-canyon habitats is the dominant habitat type throughout the unit. The Black Mesa supports a desert grassland community. The WSA supports approximately 230 vertebrate species of which 20 are special-status species (Table 3-2). See the Black Mountains URA for detailed species lists and life history information (BLM 1977).

The WSA has 76,800 acres of crucial bighorn sheep habitat—with about 100 bighorn sheep— (Table 3-3 and Map 3-12) and totally encompasses the Columbine Springs lambing grounds. According to the Black Mountains Habitat Management Plan this WSA has the best bighorn sheep habitat in the Black Mountains.

Warm Springs has 5,120 acres of suitable peregrine falcon habitat, also suitable habitat for the desert tortoise and Gila monster throughout the area and suitable habitat for Gilbert's skink in dry and wet canyons in association with turbinella oak. Ferruginous and Swainson's hawks are expected along the eastern fringes of the WSA, coming in from nearby Sacramento Valley and also on Black Mesa. A snail, known as Goldroad Fonticellia, is endemic to the Black Mountains and found in this WSA. Neither crucial habitats or population numbers are known for these six species nor population numbers and ranges of the 13 other special-status species.

WILD HORSE AND BURRO PROGRAM

This very large unit has 200-250 burros concentrated around several major springs. Some crossover occurs, but for the most part independent populations remain associated with home territory around these major water sources.

There is a well defined burro population of 50 to 55 near Cool/Walker Springs, Baker Spring and on south to Antelope/Alkali Springs. Capture of excess burros occurs on a regular basis near Cool Springs, Baker Spring and Alkali Springs and includes roping (helicopter and motor vehicle), watertrapping (motor vehicle and temporary corrals) and wingtrapping (helicopter and motor vehicles) methods. Capture access is necessary along an existing wash/way to Antelope/Alkali Springs. Antelope Spring is an improved site with a burro-proof fence and water piped to an outside trough. Regular maintenance is necessary to ensure that no burros are trapped inside the exclosure. Vegetative monitoring sites are at Cool/Walker Spring and Antelope/Alkali Springs.

Another small fairly well defined population of 20-25 burros lives around Caliche Spring. These are fenced off from the population at Antelope/Alkali Springs but there is some cross over between the Caliche and Warm Springs populations.

Population reduction by live capture occurs every two or three years. A vegetative monitoring plot is also located within one half mile of the spring.

The Warm Springs area is the hub of the major burro population (130 to 175) within this unit. This population, depending on the availability of water (pot holes) ranges from the southeast corner throughout the Warm Spring Canyon area over to McHeffy Spring.

The main access to the area and heart of the burro population is the road from the Franconia Crossing of the Santa Fe Railroad. Periodic road maintenance is required to keep this entrance passable by vehicles and horse trailers. Road maintenance is required all the way to the Warm Springs. Because of limited water, this area lends itself well to watertrapping. Two of the three main springs are fenced with exit gates installed. A temporary corral is placed around the center spring when watertrapping is in progress. Watertrapping has also occurred at McHeffy Spring four miles to the west. Access to these two areas is essential for population control.

In addition to the fences around the three warm springs, improvements are also in place at the other major water sources. McHeffy Spring has a burro proof fence around it with a water trough outside for multiple use. The outside water source must be maintained to ensure that no burros get trapped inside the exclosure and die. Other springs which have burro proof fences that have in the past entrapped burros leading to their deaths include Columbine Spring, Sheep Spring and Metate Spring. Visits to these sites are necessary to ensure protection of the riparian zones and safety of the burros. A burro proof fence is also in place at Cross Seep and must be monitored periodically. Ways along major washes provide access to within 3/4 of a mile of these sites.

To ensure no overgrazing in the area, vegetative monitoring sites have been established within one-half mile of McHeffy Springs, Metate Springs, Warm Springs East and Warm Springs North. Low level helicopter flights are necessary about every five years for burro population inventory.

CULTURAL RESOURCES

The known cultural resources are four sites that are probably eligible for the *National Register of Historic Places*. These sites are temporary prehistoric camp sites and petroglyphs. The camp sites have a variety of tool types and ceramics. The petroglyphs represent the only known occurrence in this part of the Black Mountains.

LIVESTOCK AND RANGELAND USES

Portions of four grazing allotments lie within the WSA: 1) Black Mountain Unit A (approximately 40%—500 AUMs perennial), Silver Creek (less than 1%), and Boriana Unit B (73%),

WILDLIFE HABITAT MAP 3-12

WARM SPRINGS 2-28/29

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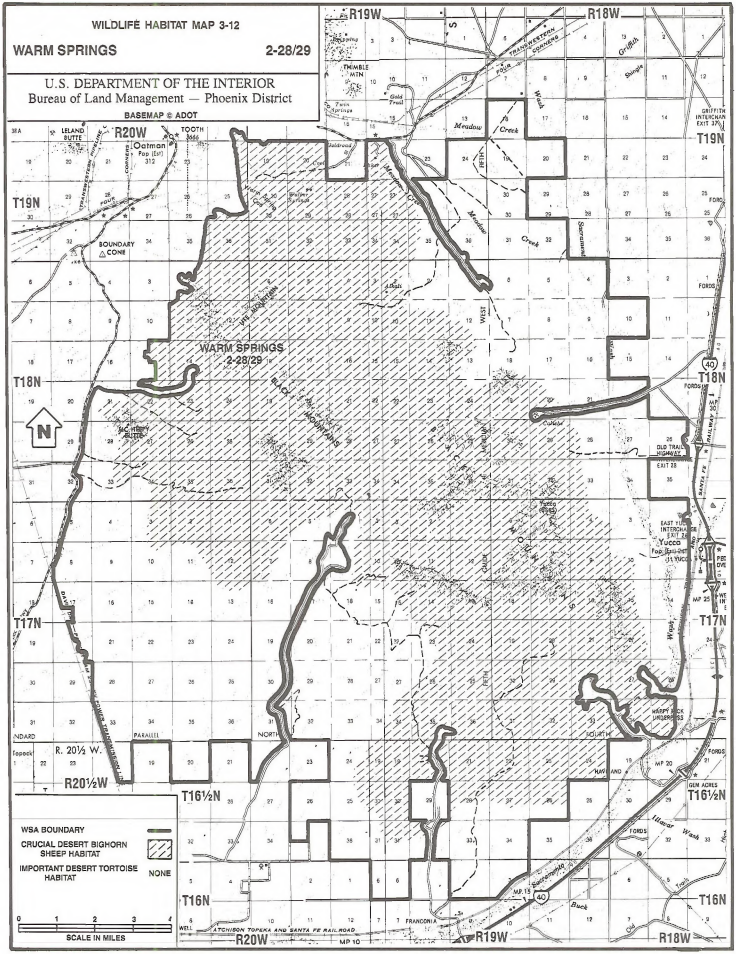

R19W
R18W
R20W
T19N
T18N
T17N
T16½N
T16N
R20½W
R20W
R19W
R18W
R. 20½ W.
WARM SPRINGS
2-28/29
BACK MOUNTAINS
BOUNDARY CONE
LELAND BUTTE
TOOTH
Ootman
Fox (Ent)
312
THIMBLE MTN
Griffith
Sunset
Meadow
Creek
Sacramento
Wash
Yucca
Hassayampa
Hillside
Wash
Hillside
Wash
Black
Cow
Creek
Wash
Wash
Wash

Burros being herded into Wing Trap by wranglers and a helicopter. Burro herd sizes are managed to prevent overpopulation and damage to desert ecosystems.

and Happy Jack Wash (38%—411 AUMs perennial). The Black Mountain Allotment is under Allotment Management Plan.

LAND USES

The WSA has 114,800 acres of public land including the 16,214 acres of private mineral estate. A portion of the western boundary to the WSA is formed by old Highway 66, now maintained by Mohave County within a 100-foot R/W (A-21021). The southwestern boundary to the WSA is formed by a power transmission line operated by Citizens Utilities Company in 155-foot R/W (A-8891).

A 230 kV transmission line operated by Western Area Power Administration (WAPA) within the 200-foot R/W PHX-085193 runs adjacent to and west of the Citizens line. AR-01868, a 100-foot-wide road R/W, provides access to the WAPA line and also forms part of the western boundary of the WSA. The eastern boundary is partly formed by a 200-foot-wide railroad R/W (PHX-086796) operated by Atchison, Topeka & Santa Fe Railroad Company.

VEGETATION

The vegetation in this WSA is characteristic of the Mohave desertscrub formation (Brown et al., 1979) with a few species characteristic of the Sonoran desertscrub formation. Creosote bush-white bursage, creosote bush-yucca, blackbrush, and *Salazaria*-mixed scrub associations are widespread. Palo verde and saguaro are found in limited numbers on the south-facing slopes and in canyons on the western side of the WSA. Smoketree is common in the sandy washes along the western side of the area. Black Mesa supports a yucca-mixed shrub-grassland association. In addition, several spring communities and a variety of riparian associations are at these springs and in the adjacent washes and canyons. These associations include cottonwood-willow, juncus-monkey flower, and submergent aquatic communities. Of special interest is the iris "blue-eyed grass" (*Sicyrinchium demissum* Greene).

Although no formal botanical inventories have been conducted in this area, linear leaf rabbit brush (Table 3-4) grows east of Sitgreaves Pass. Suitable habitat for this species is in the northwestern portion of the unit. Much of the western portion of the unit provides suitable habitat for desert cassia and horsebrush (Table 3-4).

Approximately five sections along the periphery in the southeastern portion of the WSA near the town of Yucca are suitable for yucca harvesting (see the vegetation narrative for the Mount Tipton WSA).

SOUTH BRADSHAWS EAST WSA
(AZ-020-84A) 640 acres

WILDERNESS VALUES

Location and Boundaries. This WSA is in south central Yavapai County about seven miles northwest of Black Canyon City. This unit is only one section of BLM-administered public land totaling 640 acres. The WSA is bounded on the north by the Prescott National Forest's Castle Creek Wilderness Area and the east, west and south by state land.

Naturalness. The unit is the southern portion of the Bradshaw Mountains—a very rugged and steep mountainous area. A steep ridge is along the west and north boundaries and the rest of the unit is steep east-facing slopes with a large drainage. The vegetation of the WSA is the interior chaparral type—scrub oak, mountain mahogany and some scattered juniper. There is evidence of a past forest fire, but the area has mostly recovered through the natural succession process.

Solitude. Outstanding opportunities for solitude and seclusion exist within this unit. The ridge and drainage with several opportunities to be alone, the isolated location, the lack of vehicular access and the contiguous Forest Service Castle Creek Wilderness Area all enhance the opportunities for solitude.

Primitive and Unconfined Recreation. Although this unit is small, opportunities for rock climbing, hunting, hiking and photography exist. The presence of the Castle Creek Wilderness Area in the Prescott National Forest enhances these opportunities for primitive and unconfined types of recreation.

Special Features. The unit is adjacent to the Forest Service's Castle Creek Wilderness Area. Habitat for the federal candidate and state-listed Gilbert's skink which may inhabit the area is also present.

MINERALS AND ENERGY RESOURCES

As of February 1987 there were no mining claims in this WSA. Mining has existed for many years nearby in mining districts of Tip Top, Kay, Humbug, Lane Mountain and Silver Mountain. The following minerals have been located and mined near the area: tungsten, sheelite, gold, silver, lead and some copper. The potential for oil, gas and geothermal resources in this WSA is low. Overall mineral potential for this unit is classified as moderate. See Table 3-1 and Map 3-6 for mineral potential.

View of the 640 acre South Bradshaws East WSA, looking northwesterly to the Prescott National Forest and the Castle Creek Wilderness.

RECREATION USES

Most of the recreational uses are hiking, hunting and sightseeing. The nearest vehicle trail is one-half mile from the western and southern boundaries. Recreational four-wheelers have no direct access to the unit because of the ruggedness. In recent years the area has been used mainly by day hikers and rockhounders. There may be some extended backpacking trips because of the adjacent wilderness area in the Prescott National Forest. Present overall visitor use within the WSA is estimated to be 100 VDY, all of which is nonmotorized.

WILDLIFE VALUES

Chaparral is the only important habitat type within the South Bradshaws WSA. The area is inhabited by mule deer, coyote, bobcat and various rodent species. The unit also is potential habitat for the federal candidate and state-listed Gilbert's skink.

CULTURAL RESOURCES

Since no archaeological survey has been undertaken in South Bradshaws East WSA, inadequate information is available on the cultural resources within its boundaries. It must be considered, however, that the topography, vegetation and availability of water make the chances very likely that at least one site of *National Register* quality exists in this WSA.

SIERRA ESTRELLA WSA
(AZ-020-160) 14,830 acres

WILDERNESS VALUES

Location and Boundaries. About 15 miles southeast of Phoenix, the WSA is bounded on the north and east by the Gila River Indian Reservation, with powerlines and roads forming the west and south boundaries.

Naturalness. The WSA is in a portion of the central Sierra Estrella Mountains. The steep mountain peaks, deep canyons and narrow ridges of the Sierra Estrella Mountains (Estrellas) characterize the topography of the area. About one-quarter of the mountain range is in the inventory unit.

Butterfly Mountain in the northeast corner of the unit rises 2,600 feet above the bajada to an elevation of 4,119 feet—and in only about two miles. Accompanying the high peaks are narrow ridges which drop off into steep canyons. The mouths of these canyons open into a bajada which extends outside the unit.

The vegetation is lower Sonoran upland type with paloverde and saguaro dominant. The top of the mountain has shrub-liveoak and juniper in small protected sites. Elephant bush reach the northeast extension of its range on the lower slopes. No threatened or endangered species of plants are known to grow in the area.

Solitude. Opportunities for solitude are considered good and are enhanced by a rugged ridgeline and canyons. The narrow and singular character of the ridgeline, however, and the presence of one trail to the ridge crest would make visitor to visitor encounters frequent as public use increases.

Primitive and Unconfined Recreation. The rugged terrain of the Sierra Estrella Mountains provides opportunities for primitive and unconfined recreation, the sum of which are considered outstanding. Hiking and rock scrambling opportunities challenge the visitor, with a 2,600 feet elevation change in two miles. A primitive trail offers hikers the opportunity to ascend to the Sierra Estrella ridgeline and Butterfly Peak. Some opportunities for botanical sightseeing are available because of the varied plant communities resulting from elevation change. Opportunities for hunting also exist through most of the area, with the best opportunities found in the foothills and bajadas.

Special Features. Within canyons of the Sierra Estrellas various petroglyphs can be found. Possibly old hunting camps existed in the area since most of the petroglyphs represented big game animals. The WSA provides habitat for desert bighorn sheep (a state-threatened species), desert tortoise, mountain lion, golden eagles and prairie falcons.

MINERALS AND ENERGY RESOURCES

As of August 1988 the 102 placer claims in the WSA all lie along the southwest flank of the Sierra Estrella Range.

Gold and copper occur in quartz veins cutting the granitic and gneissic rocks. These occurrences are small and of low grade.

The numerous pegmatite dikes are composed of mica, feldspar and quartz. Some exploration and minor production of mica has occurred in the past in T. 2 S., R. 1 E., section 2. One mica mine is possible in T. 3 S., R. 1 E., section 2. The quality of mica would limit the use to roofing materials and associated uses. This would depend on the quantity and quality of the pegmatic mica.

The WSA has a low potential for the occurrence of gold and copper mineralization and a moderate potential for mica.

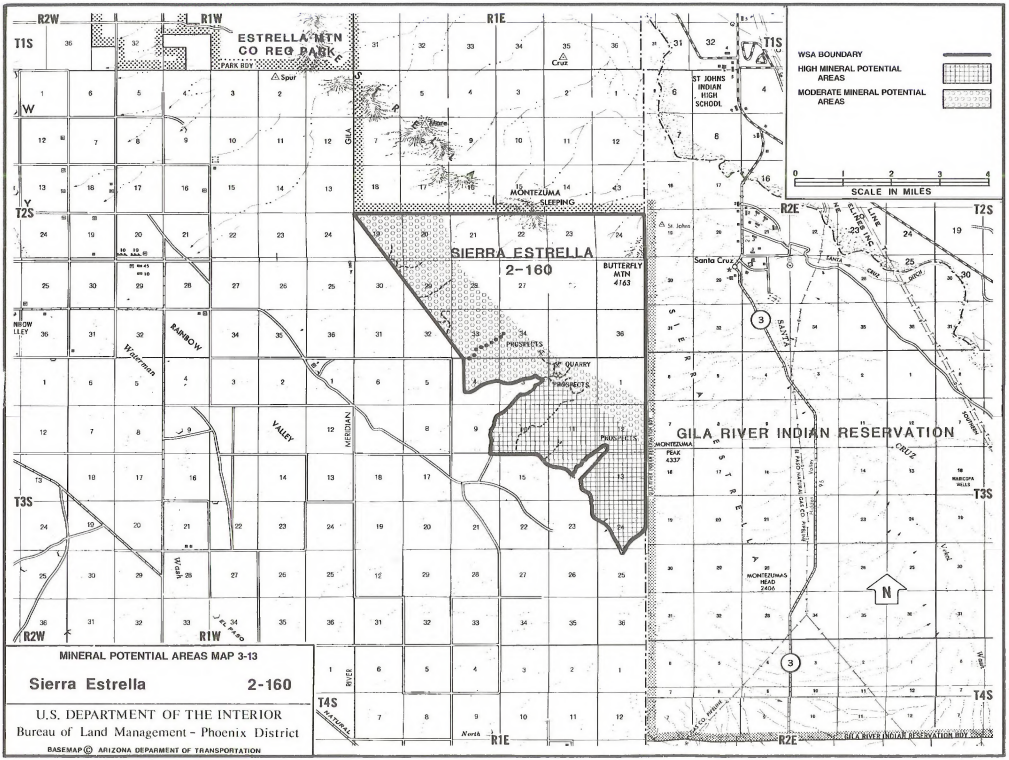
The area has a low potential for oil and gas. See Table 3-1 and Map 9-13 for mineral potential.

RECREATION USES

Most of the recreational use in this area is vehicle-based—recreational 4-wheelers and hunters can access many areas in the WSA. Day hiking and rock climbing are increasing in popularity in the area. Present visitor use within the WSA is 1,900 VDY, including 1,200 motorized VSD and 700 nonmotorized VDY.

WILDLIFE VALUES

The WSA consists of primarily Sonoran upland habitat with 12,280 acres of important habitat for desert tortoise (a candidate



MINERAL POTENTIAL AREAS MAP 3-13

Sierra Estrella 2-160

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Bureau of Land Management - Phoenix District

BASEMAP © ARIZONA DEPARMENT OF TRANSPORTATION

for federally threatened and endangered listing) and 9,830 acres of crucial habitat for desert bighorn sheep, a state-threatened species. See Map 3-14 for crucial habitat.

The top of the mountain has shrub-liveoak and juniper in small protected sites and an isolated population of giant spotted whiptail lizard in association with this remnant vegetation.

Approximately 480 adult tortoise inhabit the WSA. Fifteen to 20 resident bighorn roam the entire Sierra Estrella range. They concentrate around two waterholes, Butterfield Tank and Montezuma Tank, during dry summer months.

Other species of special interest inhabiting the WSA are golden eagles, prairie falcons, Cooper's hawks, mule deer, javelina and mountain lion.

CULTURAL RESOURCES

One cultural site has been recorded which is potentially eligible for the *National Register of Historic Places* (NRHP) as well as the Arizona State Register. This site is a rock art site which may be associated with the prehistoric Hohokam culture.

Only a limited amount of archaeological survey has been done in this WSA. Based on topographic and other ecological factors, the potential is very good for other sites with NRHP qualities.

LAND USES

One temporary right-of-way has been granted for a solar-powered communication facility. This right-of-way meets the nonimpairment requirements of the *Interim Management Policy* and can be removed immediately if the WSA is designated wilderness.

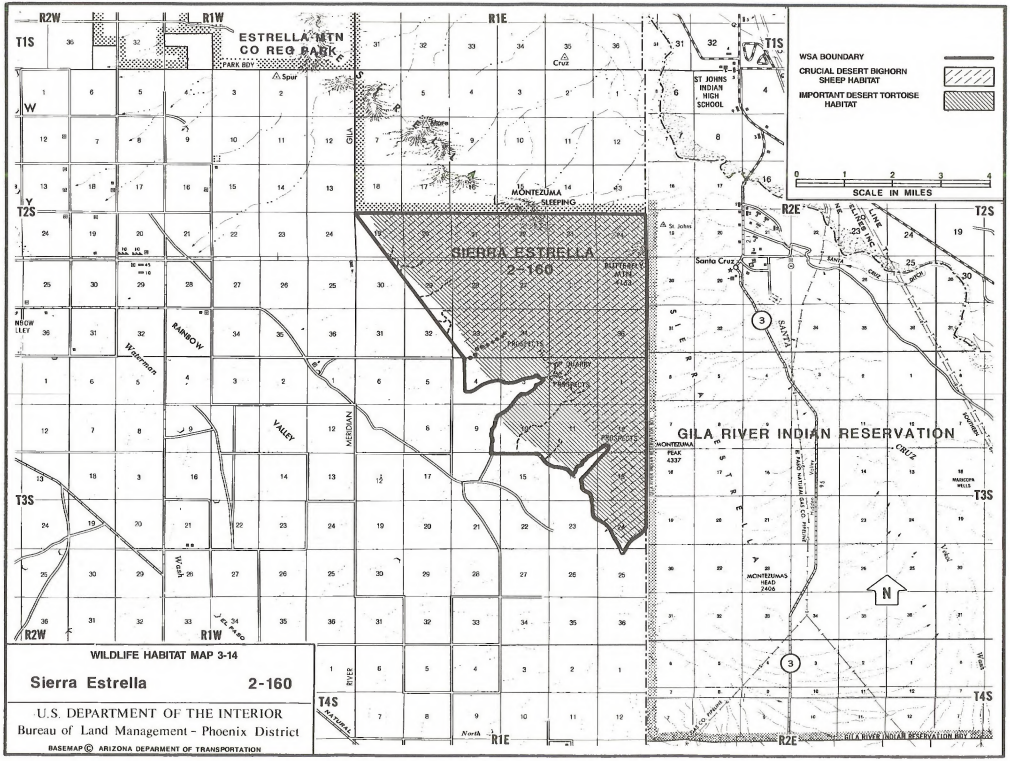
Due to the small useable space, there is only room for 6-10 additional sites that could be developed in the area. Because of the rough terrain, a road or powerline would not be practical. Therefore, any future site would be solar powered and installed by helicopter.

RAGGED TOP WSA
(AZ-020-197) 4,460 acres

WILDERNESS VALUES

Location and Boundaries. This WSA is in north-central Pima County approximately 33 miles northwest of Tucson and 22 miles south of Eloy. The unit comprises 4,460 acres of public land administered by the BLM. It is bounded on the north by the Silver Bell and Red Rock roads; the east boundary follows

West slope of Sierra Estrella Mountains — Sierra Estrella WSA.


ESTRELLA MTN CO REG PARK
PARK BDY
Spur
Cruz
ST JOHNS INDIAN HIGH SCHOOL
MONTEZUMA SLEEPING
SIERRA ESTRELLA 2-160
BUFFALO HORN 4103
Phoenix
TOP OF HORN PROSPECTS
PROSPECTS
Santa Cruz
St Johns
GILA RIVER INDIAN RESERVATION
MONTEZUMA PEAK 4337
MONTEZUMAS HEAD 2406
MARICOPA WELLS
NEW RIVER
RAINBOW
VALLEY
MERIDIAN
Wickenburg
Wash
GILA
SALT
RIVER
SANTA CRUZ
WHITE
VALLEY
WILDLIFE HABITAT MAP 3-14
Sierra Estrella 2-160
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management - Phoenix District
BASEMAP © ARIZONA DEPARMENT OF TRANSPORTATION
WSA BOUNDARY
CRUCIAL DESERT BIGHORN SHEEP HABITAT
IMPORTANT DESERT TORTOISE HABITAT
0 1 2 3 4
SCALE IN MILES
GILA RIVER INDIAN RESERVATION BDY
North

a pipeline road while the west boundary follows a road south from Silver Bell Road to the BSPK Mine. The southern boundary is formed by portions of a powerline access road and by private and state land.

Naturalness. This unit comprises the northeasternmost portion of the Silver Bell Mountains. The WSA is dominated by the 3,907-foot Ragged Top Peak, a volcanic plug which rises 1,600 feet above the valley floor. Wolcott Peak, 3,200 feet, is immediately southeast of Ragged Top Peak. The two peaks are collectively called Ragged Top.

Vegetation of the area is a paloverde-saguaro community which becomes sparse on the upper reaches of Ragged Top. Other common species include acacia, ironwood, mesquite, creosotebush and many species of cacti.

The WSA's 4,460 acres, which includes Ragged Top and the surrounding bajadas and foothills, remain in a natural condition influenced primarily by the forces of nature. Although the WSA is natural, much evidence of human activity surrounds the area. These imprints compromise the natural character of portions of the WSA for some visitors, particularly along the unit's boundaries. The road forming the western boundary leads to mining activity on the side of Ragged Top. A cherrystem boundary exclusion penetrates to the base of Wolcott Peak in the center of the WSA. Car camping sites are found along most of the jeep trails in this area and ORV use is heavy. Both ORV use and the campsites are noticeable to visitors within the WSA. A powerline to the south and a gas pipeline to the east are also noticeable to visitors, especially when they are atop Ragged Top.

Solitude. The Ragged Top WSA has some outstanding opportunities for solitude, but these are limited to a few interior portions of the area. Vegetation in the interior provides screening between users; washes and rolling hills further contribute to solitude opportunities. Solitude opportunities are limited elsewhere by the WSA's small size and the presence of noticeable human activity along the boundaries and interior cherrystems. Visitors would likely encounter each other in the narrow corridors created by the irregular cherrystem boundary configurations. Moreover, solitude opportunities could decline in the Ragged Top Peak area as visitors would use the same climbing routes and congregate on the peak.

Primitive and Unconfined Recreation. The outstanding recreational value of this unit lies in its diversities. Opportunities for hiking, rock climbing, rockhounding, sightseeing and photography are available . The rugged nature of the terrain, with challenging slopes on Ragged Top, offers outstanding opportunities for hiking and rock climbing. The unit is also an excellent area for viewing wildlife. Desert tortoise, bighorn sheep, Gila monster and possibly the spotted bat may be seen. The rugged nature of the unit with its crags and spires, along with the opportunities for plant and animal observation, makes this area outstanding for the photographer.

Special Features. The unit's rugged topographical features, dominated by Ragged Top and Wolcott Peaks and the desert vegetation, provide scenic values which enhance the primitive character of the unit. Zoological values within the unit include a diversity of species as well as the verified presence of three state-listed threatened species. Botanical values center around the diversity and density of cacti species.

Many species, past and present, representing at least seven genera are found within the WSA. A recent study revealed "Rock shelters in cracks on Ragged Top Mountain contain 11,000-year-old nests of packrats (*Neotoma*). They disclose the late Pleistocene presence of juniper (*Juniperus* sp.), one of relatively few known fossil occurrences of this tree in the eastern part of the Sonoran Desert. Junipers no longer grow on Ragged Top." (*A Survey of Potential Natural Landmarks, Biotic Themes of the Mohave-Sonoran Desert Region*. Paul S. Martin, Department of Natural Sciences, University of Arizona. 1979.)

MINERALS AND ENERGY RESOURCES

As of February 1987 there were 54 mining claims within the WSA. The southwestern portion of the unit is near the Silver Bell Mining District. The area could host occurrences and/or deposits of copper with or without molybdenum, manganese and peripheral lead and zinc, gold and silver. Other precious metals in the area include gold and silver. The Asarco Mine, a large producer of copper in the area, lies south of the WSA in the Silver Bell Mountains and is currently producing copper by the more economical teaching method from tailings.

The WSA potential for oil, gas and geothermal is low. Potential for sodium and potassium is also low.

Overall mineral potential for this WSA is classified as moderate. See Table 3-1 and Map 3-15.

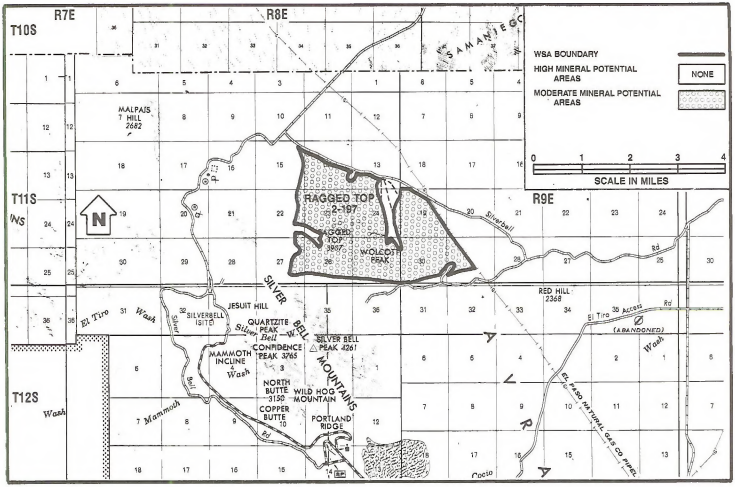
RECREATIONAL USES

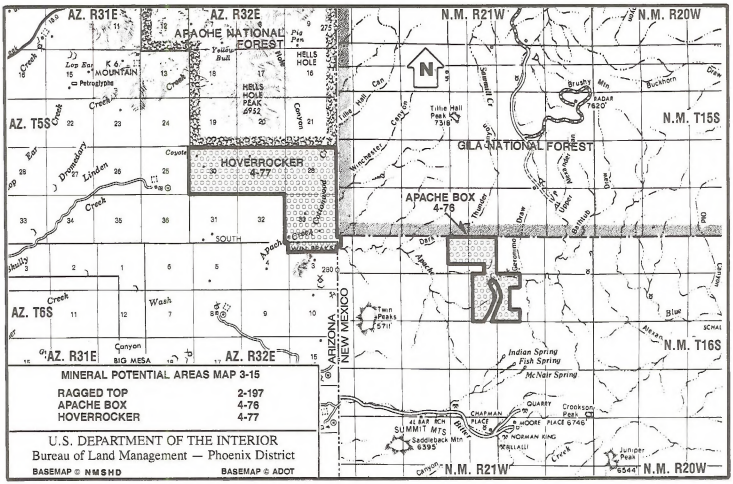
With its many opportunities, the unit offers outstanding recreational potential. Hiking, hunting, rock collecting and rock climbing are the major recreation uses in this WSA. ORVs have access to the WSA using vehicle ways and trails adjacent to and within the WSA. Most of the ORV activity is restricted to the bajada.

Present overall visitor use within the WSA is approximately 1,400 VDY, 700 motorized and 700 nonmotorized.

WILDLIFE USES

This WSA is paloverde-saguaro vegetative community (Sonoran Upland) with 4,460 acres of important habitat for desert tortoise (a candidate for listing as a federal threatened and endangered species) and 3,780 acres of crucial habitat for desert bighorn sheep (a state threatened species). Most of the crucial bighorn sheep habitat is restricted to steep portions of the WSA and the lower valley connecting Ragged Top to the Silver Bell


R7E
R8E
R9E
T10S
T11S
T12S
WSA BOUNDARY
HIGH MINERAL POTENTIAL AREAS
NONE
MODERATE MINERAL POTENTIAL AREAS
0 1 2 3 4
SCALE IN MILES
MALPAIS HILL 2682
RAGGED TOP 2-197
GOLD TOP 3867
WOLCOTT PEAK
SILVER BELL MOUNTAINS
JESUIT HILL
SILVERBELL 1815
QUARTZITE PEAK 3765
CONFIDENCE PEAK 3765
MAMMOTH INCLINE
SILVER BELL PEAK 4261
NORTH BUTTE 3150
WILD HOG MOUNTAIN
COPPER BUTTE
PORTLAND RIDGE
RED HILL 2368
(ABANDONED)
EL PASO NATURAL GAS CO. PIPELINE
Silver Bell Rd
El Tiro Wash
Mammoth Wash
Rocio Wash


AZ. R31E
AZ. R32E
N.M. R21W
N.M. R20W
APACHE NATIONAL FOREST
MOUNTAIN
Petroglyphs
HELLS HOLE PEAK 4952
HELLS HOLE
AZ. T5S
HOVERROCKER 4-77
GILA NATIONAL FOREST
N.M. T15S
APACHE BOX 4-76
SOUTH
AZ. T6S
BIG MESA
ARIZONA
NEW MEXICO
Twin Peaks 5711
N.M. T16S
Indian Spring
Fish Spring
McNair Spring
SUMMIT MTS
Saddleback Mtn 6395
CHAPMAN PLACE
MOORE PLACE 6746
NORMAN KING
QUARRY
Crookson Peak
Juniper Peak 6544
N.M. R21W
N.M. R20W
MINERAL POTENTIAL AREAS MAP 3-15
RAGGED TOP 2-197
APACHE BOX 4-76
HOVERROCKER 4-77
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
BASEMAP © NMSHD
BASEMAP © ADOT

Mountains on the west side of the unit. Quantitative data on the density, age structure and sex ratios of tortoise populations is lacking. Tortoise are usually most abundant in areas where large boulders and rock substrata are predominant (Silver Bell-Baboquivari HMP). The entire WSA is considered desert tortoise habitat. See Map 3-16 for crucial habitats.

Approximately 28 resident bighorn sheep roam the WSA. Gila monster, also a state-listed threatened species, live throughout most of the unit. Other species of special interest include mule deer, javelina, coyote, quail, raptors and various rodents.

The unit is also within an extensively studied area of the Sonoran Desert. Scientists from the University of Arizona and the International Biological Program (IBP) study the climate, geology, plants, soils, vertebrates and invertebrates of this area and compare the results with similar studies in other desert regions of the world.

CULTURAL RESOURCES

Inadequate information exists on this WSA, since less than one acre has been surveyed for cultural resources. It must be considered, however, that the vegetation and topography make the chances very likely that at least one cultural site of *National Register* quality exists within this WSA.

PROTECTED PLANTS

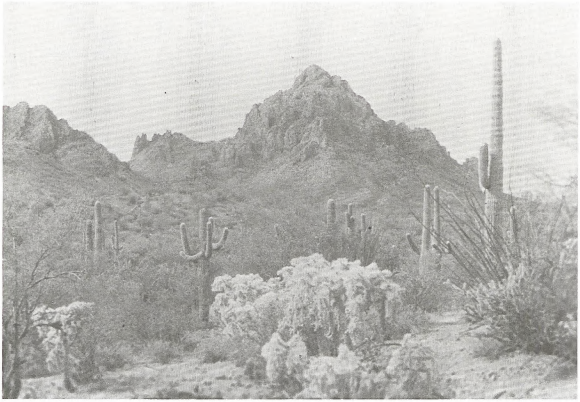
No federally listed threatened or endangered (T&E) plants have been found in this WSA.

APACHE BOX WSA
(AZ-040-76) 932 acres

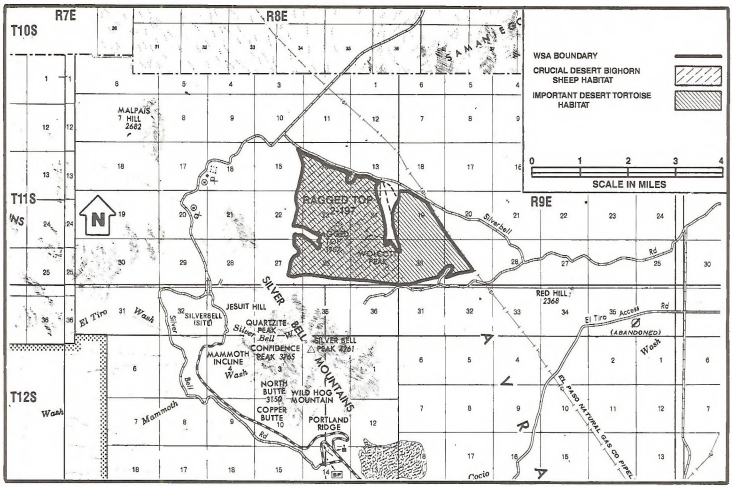
WILDERNESS VALUES

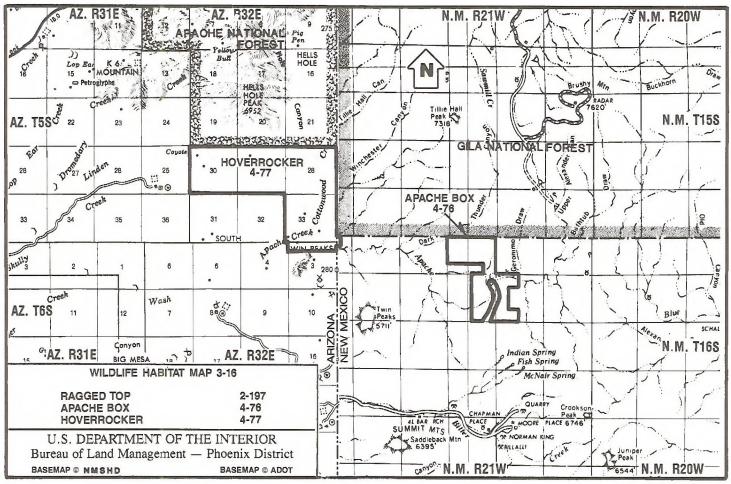
Location and Boundaries. The WSA is in the southwestern New Mexico, about 45 miles east of Safford, Arizona and is bounded on the north by Forest Service and New Mexico State land and is bounded on the east, south and west with private land . The WSA's northern boundary is contiguous for one mile with the Hell Hole WSA on the Gila National Forest (an area not recommended for wilderness designation).

Naturalness. The WSA's 932 acres are generally in natural condition. Human imprints include two masonry dams, one earthen dam, a windmill, one-half mile of fence, an old mining operation and one mile of cherrystem road leading to the site of recent mineral exploration work. The range facilities are all in the northern part of the WSA, are largely unnoticeable and do not impair naturalness. The road has a visible impact on



Bighorn sheep habitats is found in the rugged cliffs and excarpments of the Silverbell Mountains — Ragged Top WSA.


R7E
R8E
R9E
T10S
T11S
T12S
WSA BOUNDARY
CRUCIAL DESERT BIGHORN SHEEP HABITAT
IMPORTANT DESERT TORTOISE HABITAT
0 1 2 3 4
SCALE IN MILES
RAGGED TOP 2-197
MALPAIS HILL 2682
SILVER BELL MOUNTAINS
JESUIT HILL
SILVERBELL ISITE
QUARTZITE PEAK
CONFIDENCE PEAK 3865
SILVER BELL PEAK 2781
MAMMOTH INCLINE
NORTH BUTTE 3150
WILD HOG MOUNTAIN
COPPER BUTTE
PORTLAND RIDGE
RED HILL 2368
El Tiro Wash
Mammoth Wash
Cocio Wash
Silverbell Rd
El Tiro Access Rd
(ABANDONED)
EL PASO NATURAL GAS CO PIPE


AZ. R31E
AZ. R32E
N.M. R21W
N.M. R20W
N.M. T15S
AZ. T5S
AZ. T6S
N.M. T16S
APACHE NATIONAL FOREST
GILA NATIONAL FOREST
HOVERROCKER 4-77
APACHE BOX 4-76
Tillie Hall Peak 7316
Brushy Mtn
Buckhorn Draw
Lop Bar Mountain
Petroglyphs
Hells Hole Peak 6712
Hells Hole
Dry Creek
Linden Creek
Dry Apache Creek
Cottonwood Canyon
Twin Peaks 5711
Big Mesa
Canyon
Indian Spring
Pish Spring
McNair Spring
Quarry
Crockson Peak
Chapman Place
Moore Place 6746
Norman King
Summit Mts
Saddleback Mtn 6395
Juniper Peak 6544
Blue Creek
Schal Mesa
ARIZONA
NEW MEXICO
WILDLIFE HABITAT MAP 3-16
RAGGED TOP 2-197
APACHE BOX 4-76
HOVERROCKER 4-77
U.S. DEPARTMENT OF THE INTERIOR
Bureau of Land Management — Phoenix District
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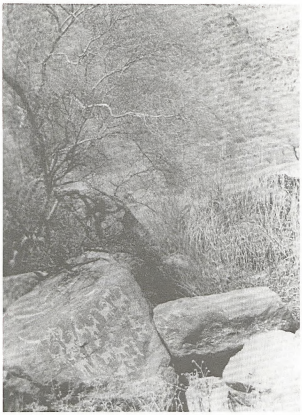


Bighorn sheep petroglyphs — Sierra Estrella WSA.

MINERALS AND ENERGY RESOURCES

As of November 1986 there were 93 mining claims within this WSA. Fluorspar, gold, silver and manganese (all strategic minerals) have been produced from mines in similar geological structures near the WSA. Though no records are known, gold has reportedly been shipped from the WSA. The potential for mineral occurrence in the WSA is moderate (See Table 3-1 and Map 3-14).

No leases are in effect and the potential is low to zero for oil and gas. No geothermal resources have been identified.

RECREATION USES

Recreation use of Apache Box WSA is very low with an estimated 50 VDYs of hunting and sightseeing (nonmotorized).

CULTURAL RESOURCES

A Mogollon rock shelter and a historic house mound, road and sheep pen have been recorded in the WSA. Neither site appears to qualify for listing on the *National Register of Historic Places*.

Only a limited amount of archaeological inventory has been done in the WSA. Based on the environmental setting and history of the area, the potential is good for other prehistoric and historic sites to be present. Some of these may be of *National Register* quality.

naturalness in the southern part of the WSA. The recent mining exploration work was partially rehabilitated and the visual impacts lessened, though they still impact the naturalness in the central part of the WSA.

The landscape of the WSA features the Apache Box, a unique canyon of steep walls, 600-foot-high cliffs, steep talus slopes and table lands above the canyon itself. WSA elevation ranges from 4,150 feet to 6,540 feet.

Vegetation varies from desert shrubs and grasses to mountain shrubs and some pinyon-juniper forest. Riparian species line the creek through the Apache Box. The table lands above the canyon also have a few ponderosa pines.

Solitude. Outstanding opportunities for solitude exist within the WSA. The deep canyon of the Apache Box and the surrounding rugged terrain offer outstanding opportunities to find seclusion from others.

Primitive and Unconfined Recreation. Opportunities for primitive and unconfined types of recreation are available, including hiking, hunting, photography, rock climbing, birdwatching and sightseeing.

Special Features. Special features within the WSA include the perennial Apache Creek, the associated riparian vegetation and the extremely scenic area of the Apache Box itself.

HOVERROCKER WSA
(AZ-040-77) 2,791 acres

WILDERNESS VALUES

Location and Boundaries. The Hoverrocker WSA is in southeastern Arizona, with a small portion (22 acres) in New Mexico. It is about 40 miles east of Safford, Arizona. The WSA is bounded on the north and east by Forest Service land and on the south and west by private and Arizona State land. The WSA's eastern boundary is contiguous for two miles with the Hell Hole WSA on the Gila National Forest (not recommended for wilderness designation).

Naturalness. The WSA's 2,791 acres are generally in natural condition. Human imprints include a masonry dam, two developed springs, three corrals and six miles of boundary fences. The impact to naturalness from these facilities is minimal.

The landscape is dominated by rolling hills, with rugged mountains outside the WSA to the north and east. The southern part of the WSA contains a short stretch of Apache Creek, with a shallow but rocky canyon. Cottonwood Creek is another shallow drainage in the eastern part of the WSA. Elevation ranges from 4,600 feet to 5,280 feet.

Vegetation is dominated by desert shrubs and grasses. Increases in elevation bring about increasing numbers of pinyon and juniper trees. Riparian species are found on both Apache and Cottonwood Creeks.

Solitude. The rolling terrain, numerous drainages and vegetation combine to offer outstanding opportunities for solitude.

Primitive and Unconfined Recreation. Opportunities exist for a wide variety of primitive recreation—backpacking, hiking, horseback riding, hunting, birdwatching, photography and sightseeing.

Special Features. The riparian vegetation in Apache and Cottonwood Creeks is a special feature in the WSA.

MINERALS AND ENERGY RESOURCES

As of November 1986, there were six active mining claims, but no records of mineral production. Fluorspar, gold, silver and manganese (all strategic minerals) have been produced from mines in similar geological structures near the WSA. The potential for mineral occurrence in the WSA is moderate (See Table 3-1 and Map 3-15).

No leasable minerals have been identified in this WSA. One lease (for 144 acres) is in effect and the potential is low to zero for oil and gas. No geothermal resources have been identified.

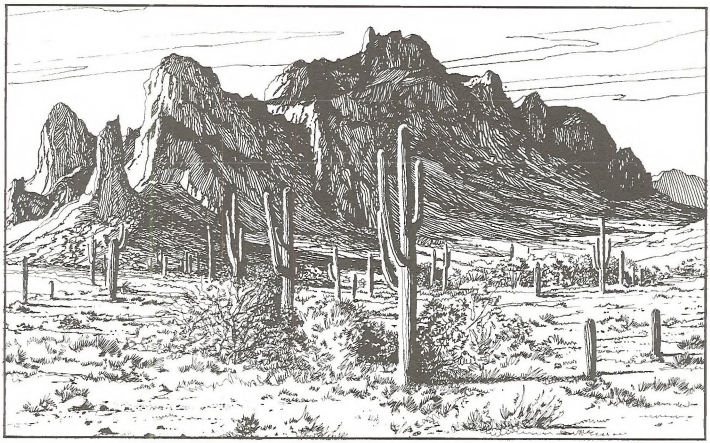
RECREATION USES

Current recreation use of Hoverrocker WSA is low. The primary recreation is hunting with 25 VDYs.

CULTURAL RESOURCES

Four prehistoric and two historic sites have been recorded in the WSA. Three of the prehistoric sites are lithic scatters and one is a food processing site. One of the historic sites is a homestead, the other is an old cattle ranching line shack and corral. The prehistoric processing site may qualify for listing on the *National Register of Historic Places*.

Only a limited amount of archaeological inventory has been done in the WSA. Based on the environmental setting and history of the area, the potential is good for other prehistoric and historic sites to be present. Some of these may be of *National Register* quality.



Chapter 4

ENVIRONMENTAL CONSEQUENCES

CHAPTER 4

ENVIRONMENTAL CONSEQUENCES

Introduction

Chapter 4 analyzes the environmental consequences of each alternative for each WSA. The analyses are commensurate with the degree of expected impact. BLM determined that no measurable impacts would result to livestock operations, wild burros, air quality classification, water quality, nonfederal lands, soils, social elements, military overflights and fire management. These components are, therefore, not discussed in this chapter (see Chapter 1 - Issues Considered But Not Analyzed). Protected plants were considered an issue in Chapter 1 and carried through the impact analysis. The conclusion drawn after the analysis was that this resource would neither be beneficially nor adversely impacted by the management actions described in Chapter 2.

Basic Assumptions

To provide a standard framework for impact analysis and comparison among the alternatives, the following assumptions were used.

1. Short-term impacts are considered to be those which would occur over a five-year period after designation, while long-term impacts are those occurring more than five years after designation. Unless otherwise stated all impacts are long-term.

2. BLM would have the funding and work force to implement the chosen alternatives.

3. Section 603 WSAs would be managed under BLM's *Interim Management Policy* (IMP) until either designated as wilderness or released by Congress. Section 202 WSAs not recommended for wilderness could be released by the State Director upon release of the FEIS.

4. If an area is designated as wilderness, the *Wilderness Management Policy* and related wilderness management regulations would be used as guides for permissible activities until a wilderness management plan is prepared for a designated area. The WSA-specific wilderness management plan would identify management actions authorized within each designated area.

5. BLM would provide adequate access to nonfederal mineral or privately owned lands within a designated wilderness area.

6. Periodic maintenance of Black Mesa Pipeline Company's coal slurry pipeline (A-438) and the Oatman Water pipeline within the Mount Nutt WSA would continue regardless of wilderness designation. Approximately 1.2 miles of road would be built across section 32, T. 25 N., R. 18 W., to reach private inholdings in section 33 within the Mount Tipton WSA, regardless of wilderness designation.

7. Mines developed on federal mineral estate within designated wilderness areas would have to be on claims that have proven discoveries prior to wilderness designation.

8. Effective on the date of designation (October 1991), any area designated as wilderness would be withdrawn from mineral leasing and mining claim staking under the mining laws and mineral sales. This provision is subject to valid existing rights.

9. New or upgraded roads developed for access to exploration programs and mineral developments in WSAs or partial areas not designated wilderness would remain open to motorized use. Use may be restricted if such access would endanger or materially interfere with the mining operation.

10. Range facilities would be maintained where needed to facilitate grazing and multiple-use management. New rangeland developments that benefit multiple use management may be allowed when site-specific environmental assessments show that wilderness resources would not be impaired. The "minimum tool" requirement for both maintenance and development could cause some increased costs both for the operator and BLM.

11. Livestock grazing would be maintained at present levels unless adjusted for reasons prescribed to achieve the multiple-use resource objectives for the rangeland.

12. The livestock operator would experience some minor increased commitment of labor and costs associated with using horses instead of motorized vehicles to place salt within designated wilderness areas, check on livestock and range improvements, and complete some maintenance or developments. Prohibitions against the use of motorized vehicles would also affect BLM's administration within wilderness areas.

13. Traditional forms of wildlife habitat improvement projects would continue to be installed in designated areas if, through an environmental assessment, it is determined that the projects comply with the intent of wilderness legislation.

14. Mining activity and rights-of-way construction would impair a visitor's perception of naturalness on a larger area than is actually disturbed. This larger area is generally the total area within viewing distance of the particular impairing activity. Thus a two-acre mine might be viewed from the surrounding hills, thereby impairing a visitor's perception of naturalness across a much larger area.

15. Impacts to wilderness values depend on 1) the size of the WSA, 2) the topography of the area where the impact occurs, 3) the location of the impact in the WSA and 4) the magnitude, duration and frequency of the impact.

16. The BLM is directed to avoid inadvertent loss or destruction of cultural resources. Cultural resource inventories, evaluation, impact analyses and mitigation measures are required on public lands prior to any surface-disturbing activities (NEPA, FLPMA, and Section 106 of the *National Historic Preservation Act*). These requirements would not be constrained by any of the wilderness alternatives under consideration.

    No sites that are potentially eligible for the *National Register of Historic Places* are known to exist in the Van Deeman, Mockingbird, Black Mountains North, Burns Spring, Grand Wash Cliff, Mount Davis, South Bradshaws East, Ragged Top or Apache Box WSAs. The lack of known significant sites in these areas is almost certainly a result of the low level of inventory that has been completed within these WSAs. This is also true for those WSAs which contain previously inventoried sites. Similar environments nearby do have significant cultural resources. These sites are usually historic mining and/or ranching remains and prehistoric camps, rock shelters and rock art sites. In addition to the protection afforded these sites under the above mentioned policies, laws and regulations, further protection for these cultural resources in each WSA would be provided by wilderness designation. Conversely, continued and increased adverse impacts to cultural resources from surface-disturbing activities such as mining, ORV use and vandalism are more probable without wilderness designation.

17. The BLM is required by the *American Indian Religious Freedom Act* (AIRFA) to consider the views of Native Americans prior to authorizing or carrying out any action which might conflict with traditional Indian religious beliefs or practices.

18. Impacts to sensitive plant (Table 3-4) and animal species (Table 3-2) under wilderness designation or nondesignation cannot be assessed in this DEIS, because locations of critical habitat and populations are not known at this time. Site-specific impacts to these species from projects that are proposed in the WSAs would be analyzed on a case-by-case basis through an EA or EIS process, and mitigating measures would be developed in these processes to avoid or minimize harm.

19. Those WSAs that are described as being dependent on adjacent wilderness or potential wilderness areas for their solitude, primitive recreation or naturalness features are discussed in this chapter as though the nearby areas were already designated as wilderness.

20. There are private mineral estate holdings in six WSAs. Access to and development of mineral resources on these lands would be allowed under all alternatives.

VAN DEEMAN WSA
(AZ-020-07) - 1,510 ACRES

Proposed Action/No Wilderness Alternative
(Map 2-1)

The *Proposed Action/No Wilderness* alternative would return 1,510 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Van Deeman WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in the entire area would experience adverse impacts from motorized vehicle use, seven mining exploration programs and five anticipated mining ventures.

Mining exploration programs would result in the development of five mining operations and their associated five miles of road construction which would impair the natural character of the entire 1,510 acres. (Presently, this area has some evidence of mining and is reached by unmaintained and barely discernible vehicle trails). The wilderness qualities of opportunities for solitude and primitive recreation would also be lost over the entire 1,510 acres.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by mining. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of development and vastly improved vehicular access are the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would be eliminated throughout the area—a result of road building and mining. The impact of these losses is lessened by the availability of similar opportunities in adjacent areas.

The sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across 100 percent of the WSA. Improved mine road access on five miles of new road would permit vehicles to traverse or reach portions of the WSA never visited by vehicle-dependent recreationists. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience.

Conclusion: Motorized vehicle use, mining and road construction would cause a loss or impairment of wilderness values of naturalness, solitude and primitive opportunities on 100 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

Under the *No Wilderness* alternative, proposed mineral development would occupy virtually the entire Van Deeman WSA which would eventually eliminate all existing recreational uses. Recreational use of 40 VDY would be displaced to nearby areas of public land offering comparable opportunities.

Conclusion: The *No Wilderness* alternative would displace all recreation use (40 VDY) to nearby public lands due to mineral development.

IMPACTS ON WILDLIFE VALUES

Under the *Proposed Action* 1,510 acres (100 percent of WSA) of crucial bighorn sheep habitat would be destroyed by the five projected open pit mines — which would prevent the use of this area by bighorn sheep. Van Deeman Tank in Section 30 would be abandoned as a sheep water as the sheep would not use the site due to mining disturbances.

It is expected that the desert tortoise and the Gila monster would be totally eliminated from this area because of collecting, killing and direct habitat destruction.

Under the *Proposed Action* motorized vehicle travel is expected to negatively affect those animals sensitive to human intrusion. Bighorn sheep will avoid heavily used vehicle ways. Wildlife contacts with humans increase when motorized vehicles are used, thus increasing the probability of disturbance to wildlife through collecting, direct killing and habitat destruction.

Conclusion: 1,510 acres (100 percent of WSA) of crucial bighorn sheep habitat and 1,510 acres of desert tortoise and Gila monster suitable habitat would be totally destroyed by mineral development, resulting in the loss of two desert bighorn. The desert tortoise and Gila monster would be totally eliminated from the WSA.

IMPACTS ON CULTURAL RESOURCES

This alternative would not provide additional protection for a prehistoric rock shelter and historical mine that are probably present. Vehicle travel, future mining activity and new road construction would increase negative impacts to these sites.

Conclusion: A prehistoric rock shelter and old mine that probably exist would not be protected.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values of naturalness, solitude and primitive recreation over the entire WSA would be impaired by mineral development and motorized vehicle use.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTANANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of five mines would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 1,510 acres developed for minerals.

All Wilderness Alternative (Map 2-1)

The *All Wilderness* alternative would designate 1,510 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Van Deeman WSA would provide long-term legislative protection for its wilderness values. Although the area would be under wilderness management, two mines (on mining claims that have proven discoveries) would be developed within the wilderness in a manner that would affect wilderness values.

Precluding the development of three medium mines would maintain the existing wilderness value of naturalness on 605 acres. However, the perception of naturalness would not be preserved and the quality and solitude and primitive recreation opportunities would be lost or impaired across those 605 acres due to the development of nearby mines.

Because of valid existing rights, development of two mines is anticipated whether the area is designated wilderness or not. Mining and three miles of road construction would result in long-term loss of naturalness on 905 acres. The sights and sounds of mining and traffic would be visible and audible from surrounding area; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired throughout the entire 1,510 acres.

Conclusion: Wilderness designation under the *All Wilderness* alternative would not maintain any of the wilderness values of solitude and primitive recreation across any part of the WSA, but would preserve naturalness on 605 acres.

IMPACTS ON MINERALS DEVELOPMENT

Under *All Wilderness*, 1,510 acres of federal mineral estate would be withdrawn from mineral entry which would stop any future exploration activities, but would have no effect on the development of two open-pit mines in the WSA due to the advanced nature of the exploration program.

Conclusion: *All Wilderness* would stop future exploration projects, but would not affect the development of two open-pit mines within the designated area on claims with valid existing rights.

IMPACTS ON RECREATION USE

Under the *All Wilderness* alternative, proposed mineral development would affect virtually the entire Van Deeman WSA, which would eventually eliminate all existing recreational uses. Recreational use of 40 VDY would be displaced to nearby areas of public land offering comparable opportunities.

Conclusion: The *All Wilderness* alternative would displace all 40 VDY of recreation use to nearby public lands due to mineral development.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 605 acres (40.0 percent) of crucial bighorn habitat and suitable desert tortoise and Gila monster habitat in the WSA from further significant surface-disturbing activities such as mineral exploration and ORV use. Because of valid existing mining rights, mine development and the subsequent increase in human activity would destroy 905 acres (60 percent) of bighorn crucial habitat and desert tortoise and Gila monster suitable habitat within the WSA.

Despite the protection under *All Wilderness*, these open pit mines are expected to eliminate bighorn from the WSA because of the increased contacts with humans and the large size of the habitat disturbance. Also, the bighorn water, Van Deeman Tank in Section 30, would be destroyed and therefore the area would become unwatered. The loss of two bighorn is anticipated.

The increase in motorized vehicle travel would also adversely impact those animals sensitive to human intrusion. As motorized use increases (access to the two mines) there would be more contact between humans and bighorn sheep, resulting in disturbance to wildlife through collecting, direct killing and habitat destruction.

Conclusion: The *All Wilderness* alternative would protect 605 acres of crucial bighorn habitat, desert tortoise and Gila monster suitable habitat from further significant surface-disturbing activities. Because of valid existing mining rights, 905 acres of crucial bighorn habitat and suitable desert tortoise and Gila monster habitat would be destroyed. It is anticipated that bighorn would stop using the WSA and that mineral development would result in the loss of two bighorn. Van Deeman Tank would be abandoned as a bighorn water.

IMPACTS ON CULTURAL RESOURCES

Although most of this WSA is probably going to have future mining operations, some restrictions would protect a probable rock shelter and an old mine. General vehicle and ORV use would be prohibited.

Conclusion: A prehistoric rock shelter and an old mine that probably exist in this WSA would be better protected.

No other resources would be impacted by this alternative.

MOCKINGBIRD WSA
(AZ-020-08) - 5,815 ACRES

Proposed Action/No Wilderness Alternative
(Map 2-1)

The *Proposed Action/No Wilderness* alternative would return 5,815 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Mockingbird WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long-term, wilderness values in the entire area would experience adverse impacts from motorized vehicle use, five mining exploration programs, two anticipated mining ventures and the construction of an apron water catchment.

Mining exploration programs would result in two mining operations which would, along with the associated seven miles of road construction, impair the natural character of 910 acres. (Presently, some of these areas have moderate evidence of mining and are reached by unmaintained and barely discernible vehicle trails). Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over a larger area of 3,000 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Construction of an apron water catchment would directly disturb the naturalness and solitude on one-quarter acre and the visitor's perception of those wilderness qualities over the 50 acres in which it would be visible.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by mining. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of development and vastly improved vehicular access would be the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would experience a considerable decline in the northwest and southeast portions—a result of road building and mining. The impact of these lost opportunities is lessened by the availability of similar opportunities in adjacent areas.

Because 5,815 acres and seven miles of mine roads would be open, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across 52 percent of the WSA. Improved mine road access on seven miles of new road would permit vehicles to traverse or reach portions of the WSA never before visited by vehicle-dependent recreationists. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience.

Conclusion: The *No Wilderness* alternative would not prevent any adverse impacts to wilderness values. As a result, motorized vehicle use, mining and road construction would cause a loss or impairment of wilderness values of naturalness, solitude and primitive opportunities on 52 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

Under the *No Wilderness* alternative, proposed mineral development would be scattered throughout and occupy much of the Mockingbird WSA. Disturbing the naturalness, scenic values and solitude over such a broad portion of the area would eliminate most opportunities for such nonmotorized recreational pursuits as day hiking and birdwatching. Nonmotorized recreational use of 20 VDY would be displaced to nearby areas of public land offering much higher quality opportunities. Motorized uses such as recreational four-wheeling would generally benefit as a result of access road construction brought about by wide-spread mineral development. Motorized recreational use of 60 VDY would not be displaced as a result of the projected level of long-term mineral development.

Conclusion: Under the *No Wilderness* alternative, 20 VDY of nonmotorized recreational use would be displaced because of mineral development.

IMPACTS ON WILDLIFE VALUES

Under the *Proposed Action/No Wilderness* 910 acres or 22.7 percent of crucial desert bighorn habitat in the WSA would be

destroyed. The presence of one large and one medium open pit mine with associated human activities would prevent bighorn from utilizing 40 percent of the WSA. Approximately 910 acres (15.5 percent of WSA) of desert tortoise and Gila monster suitable habitat would be destroyed. These two species would be eliminated in the mine areas. They would be reduced or eliminated within one-quarter to one-half mile of the roads and mines because of harassment, collecting or killing.

Recreational motorized vehicle travel would continue to adversely affect bighorn sheep and other animals sensitive to human intrusion. Bighorn sheep are expected to avoid heavily used vehicle ways and move to less suitable areas. Wildlife contacts with humans would increase, resulting in disturbance to wildlife through collecting, direct killing and habitat destruction.

Conclusion: Approximately 910 acres of crucial bighorn habitat, suitable desert tortoise and Gila monster habitat would be destroyed by mineral development.

IMPACTS TO CULTURAL RESOURCES

This alternative would not provide additional protection for two prehistoric rock shelters and two old mines that are probably present. Vehicle travel, future mining activity and new road construction would increase negative impacts to these sites.

Conclusion: Two prehistoric rock shelters and two old mines that probably exist would not be better protected.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values on portions of the WSA would be disturbed by mineral development and motorized vehicle use.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of two mines would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 910 acres developed for minerals and road access.

All Wilderness Alternative (Map 2-1)

The *All Wilderness* alternative would designate 5,815 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Mockingbird WSA would provide long-term legislative protection for its wilderness values. Wilderness values would benefit in certain areas because anticipated road construction and motorized vehicle use would be excluded. However, under wilderness management five mines (on mining claims that had proven discoveries) would be developed within the wilderness in a manner affecting wilderness values.

Eliminating all motorized recreation use on 5,815 acres would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not encounter or hear motorized users in the 25 percent of the WSA presently affected by motorized use.

The natural character of one-quarter acre and the perception of naturalness on 50 acres would be impaired by the development of an apron water catchment. Installed under strict wilderness management constraints, however, the facilities would blend in with their surroundings and be noticeable only upon direct encounter instead of on the 50 acres surrounding the waters. There would be some brief losses of wilderness values during construction and periodic maintenance.

Because of valid existing rights, development of five mines is anticipated whether the area is designated wilderness or not. Mining and four miles of road construction would result in long-term loss of naturalness on 916 acres. The sights and sounds of mining and traffic would be visible and audible from surrounding area; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired over 3,000 acres.

Conclusion: Wilderness designation under the *All Wilderness* alternative would not maintain the wilderness values of naturalness, solitude and primitive recreation across 52 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under *All Wilderness*, 5,815 acres of federal mineral estate would be withdrawn from future mineral entry, which would preclude future exploration projects.

Conclusion: The *All Wilderness* would preclude future exploration projects.

IMPACTS ON RECREATION USE

Under the *All Wilderness* alternative, proposed mineral development would occupy much of the Mockingbird WSA. These developments would be scattered throughout. Elimination of the naturalness, scenic values and solitude over several portions of the area would eliminate many opportunities for such nonmotorized recreational pursuits as day hiking and bird-watching. Nonmotorized recreational use of 20 VDY would largely be displaced to nearby areas of public land offering much higher quality opportunities for such use.

Conclusion: Under the *All Wilderness* alternative most of the 20 VDY of nonmotorized recreational use would be displaced because of mineral development.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 4,892 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 3,376 acres (84.4 percent) of crucial bighorn habitat and 4,892 acres (84.1 percent) of suitable habitat for the desert tortoise and Gila monster.

Mine development and the subsequent increase in human activity would destroy 624 acres (15.6 percent) of bighorn crucial habitat.

The four miles of new roads for mine access along with the mines would directly destroy 916 acres (15.9 percent) of desert tortoise and Gila monster suitable habitat. Any of these species adjacent to roads and mines would be negatively affected because of increased contacts with humans which often result in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease significantly because recreational travel would be restricted to foot travel. Therefore, human contacts that disturb wildlife would be minimal.

Conclusion: The *All Wilderness* alternative would protect 3,376 acres of crucial bighorn habitat and 4,892 acres of desert tortoise and Gila monster suitable habitat from further significant surface-disturbing activities. Mineral development would adversely impact 624 acres of crucial bighorn habitat, 916 acres of desert tortoise and Gila monster suitable habitat.

IMPACTS ON CULTURAL RESOURCES

This alternative would provide additional protection for two prehistoric rock shelters and two old mines. Vehicle travel, future mining activity and new road construction would be limited or prohibited.

Conclusion: Additional protection would be provided for two prehistoric rock shelters and two old mines that are probably present in this WSA.

No other resources would be impacted under this alternative.

BLACK MOUNTAINS NORTH
(AZ-02-09) 19,900 ACRES

Proposed Action/Partial Wilderness (Map 2-2)

The *Proposed Action/Partial Wilderness* for the Black Mountains North WSA would designate 18,400 acres as wilderness and return 1,500 acres to other multiple uses. This alternative differs from the *All Wilderness* alternative in that boundary adjustments would 1) allow for anticipated expansion of the Portland Mine, 2) exclude an area of high mineral potential including an anticipated open-pit mine in the southern portion of the WSA and 3) allow a vehicle way in Lost Cabin Wash to remain open, providing access to Lake Mohave.

Under this alternative the following environmental consequences are anticipated.

AREA PROPOSED FOR WILDERNESS DESIGNATION

IMPACTS ON WILDERNESS VALUES

The *Proposed Action/Partial Wilderness* alternative would provide long-term legislative protection to wilderness values on 18,400 acres of the WSA. Wilderness values would benefit in certain areas because motorized vehicle use would be excluded. Three mines, on mining claims with valid existing rights, would be developed within the wilderness in a manner affecting wilderness values—however, this use would occur in any event.

Three mining operations on claims with valid existing rights would cause extensive and long-term surface disturbances that would impair the natural character of 105 acres. Visitors' perception of naturalness would also be lost or impaired over an area of 600 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Construction of the wildlife water developments would directly disturb the naturalness and solitude on one-quarter acre. Design criteria would be such that no disturbance to the visitor's perception of the wilderness qualities of naturalness, solitude and primitive recreation would occur outside this one-quarter acre area.

Eliminating all motorized recreation use on 18,400 acres of wilderness would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not encounter or hear motorized users on the 2,000 acres of the designated

portion of the WSA presently subject to the sights and sounds of motorized vehicles. All washes and trails would be available for only, foot and horseback travel.

Opportunities for solitude and primitive recreation that would be preserved by wilderness designation include skill-testing cross-country treks, excellent horseback possibilities, wildlife observation and photography, and general sightseeing.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would maintain wilderness values on 96.7 percent of the area by preventing adverse impacts to naturalness, solitude, and primitive and unconfined recreation from mining developments and motorized vehicle use.

IMPACTS ON MINERALS DEVELOPMENT

Under *Proposed Action/Partial Wilderness* 9,460 acres of federal minerals would be withdrawn from future mineral entry, which would deny the exploration projects, but would have no effect on the development of the deposits already discovered in the WSA. Privately owned mineral estate on 8,940 acres would remain open to mineral development.

Valid existing rights would allow the development of two open-pit and one underground mine within the designated area.

Conclusion: *Proposed Action/Partial Wilderness* would deny the exploration projects (on federal mineral estate), but would not impede the development of two open-pit mines and one underground mine.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 18,400 acres by closing this acreage to motorized use and displacing 100 VDY of motorized recreation use to nearby public lands. Nonmotorized recreation activities that would benefit from these actions include horseback riding, day hiking, sightseeing, overnight backpacking, wildlife observation and photography.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 18,400 acres by displacing 100 VDY of motorized recreation use to nearby public lands.

The Black Mountain ridgeline affords view of Lake Mohave, the Colorado River and the Newberry Mountains in Nevada — Black Mountains North WSA.

IMPACTS ON WILDLIFE VALUES

The *Proposed Action/Partial Wilderness* would protect 18,195 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. The area protected includes 1) 12,935 acres of crucial bighorn habitat, 2) all but 300 acres of the 5,190-acre Lost Cabin bighorn sheep lambing grounds, 3) 6,935 acres (97.1 percent) of suitable peregrine falcon habitat and 4) 18,195 acres (98.8) of suitable habitat for the desert tortoise and the Gila Monster.

Because of valid existing mining rights, mine development and the subsequent increase in human activity would destroy 1) 285 acres (1.5 percent) of bighorn crucial habitat, 2) 205 acres (2.9 percent) of peregrine falcon suitable habitat and 3) 205 acres (1.0 percent) of desert tortoise and Gila monster suitable habitat. Any of these species adjacent to mines would be adversely affected because of increased contacts with humans—which often results in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites. The loss of four desert bighorn is anticipated.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease significantly because recreational travel would be restricted to foot travel. Therefore, recreation related human contacts resulting in disturbances to wildlife would be minimal, which contrasts sharply with the increased human-caused disturbances related to mining.

Conclusion: The *Proposed Action/Partial Wilderness* would protect 12,935 acres of crucial bighorn habitat (includes 4,890 acres of lambing grounds), 6,935 acres of suitable peregrine habitat and 18,195 acres suitable desert tortoise and Gila monster habitat from further significant damage.

IMPACTS ON CULTURAL RESOURCES

This alternative would provide the additional protection of wilderness status. Vehicle travel, future mining activity and new road construction would be prohibited or limited. This alternative would reduce negative impacts to two prehistoric campsites, a prehistoric rock shelter and an old mine that are probably present in this WSA.

Conclusion: Two prehistoric campsites, a prehistoric rock shelter and an old mine that are probably present would be better protected.

AREA RECOMMENDED FOR USES OTHER THAN WILDERNESS DESIGNATION.

IMPACTS ON WILDERNESS VALUES

Wilderness values on the 1,500-acre portion of the WSA returned to other resource uses would not receive the legislative protection provided by wilderness designation. Over the long term, wilderness values would experience adverse impacts from motorized vehicle use and expansion of one open-pit mine into the area.

Expansion of the Portland Mine would impair the natural character of 250 acres (area with extensive long-term surface disturbance) and one open-pit mine would disturb 300 acres. Visitors' perception of naturalness would be lost or impaired over the entire 1,500 acres of the surrounding lands where visitors would be directly subject to the sights of the mines.

Solitude and primitive recreation opportunities would also deteriorate in the area because motorized vehicle traffic would continue. The sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities over the entire area.

Conclusion: Adverse impacts to wilderness values would not be prevented on the portion of the WSA not designated wilderness. Consequently, motorized vehicle use and expansion of an open-pit mine would impair wilderness values on the entire 1,500 acres (8 percent of the entire WSA or 100 percent of the area returned to other resource uses).

IMPACTS ON MINERAL DEVELOPMENT

Under the *Proposed Action/Partial Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not impact mineral development.

IMPACT ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation use on 1,500 acres of WSA, although motorized recreation use levels would increase slightly because of nondesignation.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not change opportunities for recreation use on 1,500 acres of WSA.

IMPACTS ON WILDLIFE VALUES

A total of 300 acres (20 percent of area) of desert bighorn crucial habitat and 550 acres (36.6 percent) of peregrine falcon suitable habitat would be destroyed. A total of 550 acres (33.3 percent) of suitable desert tortoise and Gila monster habitat would be destroyed by mineral development. Any of these species adjacent to the mine and roads would be negatively affected because of increased contacts with humans which often results

in harassment, collection or direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of the disturbed sites.

ORV use would increase, thus increasing disturbances to the above species.

Conclusion: A total of 550 acres of crucial bighorn habitat, 550 acres of suitable peregrine habitat and 550 acres of suitable desert tortoise and Gila monster habitat would be destroyed by mineral development.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values of the WSA would be disturbed over 25 percent of the area by mineral development and motorized vehicle use.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of four mines would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 2,100 acres developed for minerals and road access.

All Wilderness Alternative (Map 2-3)

The *All Wilderness* alternative would designate 19,900 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Black Mountain North WSA would provide long-term legislative protection for its wilderness values. Wilderness values would benefit in certain areas because motorized vehicle use and 312 acres of mining and access construction would be excluded. However, under wilderness management, five mines (on mining claims that had proven discoveries or on nonfederal minerals) would be developed within the wilderness in a manner affecting wilderness values.

Precluding 557 acres of mining disturbance would maintain the existing wilderness value of naturalness. Moreover, the perception of naturalness would be preserved and the quality and solitude and primitive recreation opportunities sustained across 5,900 acres.

Eliminating all motorized recreation use on the 2,000 acres presently accessible to motor vehicles would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not encounter or hear motorized users in the 30 percent of the WSA presently affected by motorized use.

Because of valid existing rights, development of five mines is anticipated whether the area is designated wilderness or not. Mining would result in long-term loss of naturalness on 655 acres. The sights and sounds of mining and traffic would be visible and audible from surrounding area; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired on 2,100 acres.

Construction of the pothole water developments would directly disturb the naturalness and solitude on one-quarter acre. Design criteria would be such that no disturbance to the visitor's perception of the wilderness qualities of naturalness, solitude, and primitive recreation would occur outside this one-quarter acre area.

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across 89 percent of the WSA by precluding motorized vehicle recreation and some mining.

IMPACTS ON MINERALS DEVELOPMENT

Under *All Wilderness*, 10,190 acres of federal minerals would be withdrawn from mineral entry under the mining laws, subject to valid existing rights. Wilderness designation would deny the exploration projects and would also cause mining companies to make major decisions on properties based on less than complete data. A total of 9,710 acres of private minerals would remain open to mineral developments.

Although future mineral exploration would be precluded (on federal mineral estate), valid existing rights would allow the development of four open-pit mines and one underground mine within the designated area.

Conclusion: *All Wilderness* would deny the exploration projects (on federal mineral estate), but would not stop the development of four open-pit mines and one underground mine. Also, there are 9,710 acres in private mineral estate that would remain open for mineral exploration and development.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation by closing 19,900 acres to vehicles and displacing 450 VDY of motorized use. Nonmotorized recreation activities (day hiking, backpacking, horseback riding and rockhounding) would benefit as a result.

Conclusion: The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation on 19,900 acres and displace 450 VDY of motorized use.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 1) 19,195 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use, 2) 13,695 acres (95.1 percent of WSA) of crucial bighorn habitat which includes 4,890 (92.2 percent) acres of the Lost Cabin bighorn lambing grounds, 3) 7,935 acres (91.8 percent) of suitable peregrine falcon habitat and 4) 19,195 acres (96.4 percent) of suitable habitat for the desert tortoise and Gila monster.

Mineral development and the subsequent increase in human activity would destroy 655 acres, 4.9 percent of crucial bighorn habitat and 8.2 percent of suitable peregrine falcon habitat. The new roads along with the mines would directly destroy 655 acres (3.6 percent) of suitable desert tortoise and Gila monster habitat in the WSA. Any of these species adjacent to roads and mines would be negatively affected because of increased contacts with humans—which often results in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites. The loss of four desert bighorn is anticipated.

Although the visitor use days would increase, recreational impacts to wildlife would be expected to decrease significantly because recreational travel would be restricted to foot travel. Therefore, human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *All Wilderness* alternative would protect 13,695 acres of crucial bighorn habitat, 7,935 acres of suitable peregrine falcon habitat, and 19,195 acres of suitable desert tortoise and Gila monster habitat from further significant surface-disturbing activities. Mineral development would adversely impact 655 acres of crucial bighorn habitat, suitable peregrine falcon habitat, and suitable desert tortoise and Gila monster habitat. The loss of four bighorn sheep is anticipated.

IMPACTS ON CULTURAL RESOURCES

This alternative is essentially the same as the *Proposed Action/Partial Wilderness*.

No other resources would be impacted by this alternative.

No Wilderness Alternative (Map 2-3)

The *No Wilderness* alternative would return 19,900 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Black Mountains North's WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience adverse impacts from motorized vehicle use, mining exploration programs, four anticipated mining ventures and the construction of an apron water catchment.

Mining exploration programs would result in four mining operations and their associated eight miles of road construction which would impair the natural character of 1,212 acres. Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over a larger area of 8,400 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Construction of the pothole water developments would directly disturb the naturalness and solitude on one-quarter acre. Design criteria would be such that no dilution of the visitor's perception of the wilderness qualities of naturalness, solitude, and primitive recreation would occur outside this one-quarter acre area.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by the mining and mining roads. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of development and vastly improved vehicular access would cause the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would experience a considerable decline in the eastern half of the unit—a result of road building and mining. However, similar opportunities are available elsewhere in the region to compensate for this loss.

Because the entire 19,900 acres would be open to ORV use, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across 25 percent of the WSA. About 2,000 acres are presently used by ORV recreationists. Improved mine road access on eight miles of new road would permit vehicles to traverse or reach portions of the WSA infrequently or never driven before. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience.

Conclusion: The *No Wilderness* alternative would not prevent any adverse impacts to wilderness values. As a result, motorized vehicle use, mining, road construction and water catchments would cause a loss or impairment of wilderness values of naturalness, solitude and primitive opportunities on 58 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would not change opportunities for motorized and nonmotorized recreation activities in the Black Mountains North WSA. Motorized use would increase by 250 VDY and nonmotorized by50 VDY.

Conclusion: Opportunities for recreation use woud remain unchanged under the *No Wilderness* alternative.

IMPACTS ON WILDLIFE VALUES

Under the *No Wilderness* alternative, 19,900 acres would be returned to other multiple uses under MFP decisions. Although this area would receive some protection from road construction, ORV use, mine development and mine exploration, these activities would degrade habitats of desert bighorn, peregrine falcon, desert tortoise and the Gila monster by increasing human activity. This often results in harassment, collection and direct killing. While quantification of populations is not possible, this disturbance would result in the decrease in numbers and ranges of desert bighorn (affecting 14,400 acres of crucial habitat, including 4,890 acres of the Lost Cabin lambing grounds), peregrine falcon (affecting 8,640 acres of suitable habitat) and the desert tortoise and Gila monster (affecting 19,900 acres of suitable habitat).

ORV use would increase and the use of motorized vehicles would have the same effects on wildlife as discussed above.

Mine development and the subsequent increase in human activity would destroy 917 acres (6.3 percent) of crucial bighorn habitat, 1,212 acres (14 percent) of peregrine falcon suitable habitat and 1,212 acres (6.1 percent) of desert tortoise and Gila monster habitat in the WSA. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites. The loss of four desert bighorn is anticipated.

Conclusion: Under the *No Wilderness* alternative 14,400 acres of crucial bighorn habitat (includes 4,890 acres of lambing grounds), 8,640 acres of suitable peregrine falcon habitat, and 19,900 acres of suitable desert tortoise and Gila monster habitat would be returned to other multiple use under the MFP decisions. These habitats would degrade because of increased surface-disturbing activities such as ORV use, road construction and mine exploration and development. Mine development would destroy 917 acres of crucial bighorn habitat, 1,212 acres of suitable peregrine falcon habitat, and desert tortoise and Gila monster habitat.

IMPACTS ON CULTURAL RESOURCES

This alternative would not provide the additional protection of wilderness status. Vehicle travel, future mining activity and new road construction would not be limited. This alternative would increase negative impacts to the cultural resources that are probably present.

Conclusion: Additional protection would not be provided for two prehistoric campsites, a prehistoric rock shelter and an historical mine that are probably present.

BURNS SPRING WSA
(AZ-020-10) - 30,600 ACRES

Proposed Action/Partial Wilderness (Map 2-2)

The *Proposed Action/Partial Wilderness* for the Burns Spring WSA would designate 23,000 acres as wilderness and return 7,600 acres for other resource uses. This alternative differs from the *All Wilderness* alternative in that boundary adjustments would 1) allow for the anticipated expansion of the Portland Mine and exclude an area of high mineral potential which includes an anticipated open-pit mine near the Portland Mine (Lost Cabin Wash area of the WSA), 2) exclude three sections of the WSA on the north and east, which are surrounded on three sides by private land, thus unmanageable, and 3) allow continued vehicle use in Tyro Wash, access to Lake Mohave and the areas south of Tyro Wash which includes one anticipated open-pit mine.

Under this alternative the following environmental consequences are anticipated.

AREA PROPOSED FOR WILDERNESS DESIGNATION.

IMPACTS ON WILDERNESS VALUES

The *Proposed Action/Partial Wilderness* alternative would provide long-term legislative protection to wilderness values on 23,000 acres of the WSA. Wilderness values would benefit in certain areas because motorized vehicle use would be excluded. Two mines, one on a mining claim with valid existing rights and one on private minerals, would be developed within the wilderness in a manner affecting wilderness values—however, this would happen whether or not the area is designated.

Two mining operations would cause extensive and long-term surface disturbances that would impair the natural character of 600 acres. Visitors' perception of naturalness would also be lost or impaired over an area of 2,000 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Eliminating all motorized recreation use on 23,000 acres of wilderness would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not encounter or hear motorized users on the 3,500 acres of the designated portion of the WSA presently subject to the sights and sounds of motorized vehicles. All washes and trails would be available for only foot and horseback travel.

Maintenance of one livestock spring development and four wildlife water developments would require occasional use of motorized equipment. However, the temporary nature of these disturbances would not impair wilderness values of naturalness, solitude and primitive recreation. Development of two new pothole or dam wildlife water sources would impair the wilderness qualities of naturalness, solitude and primitive recreation on approximately ¼ acre.

Opportunities for solitude and primitive recreation that would be preserved by wilderness designation include skill-testing cross-country treks, some good horseback riding possibilities, wildlife observation, photography, and sightseeing for unique plant communities.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would maintain wilderness values on 87 percent of the designated portion of the WSA by preventing adverse impacts to naturalness, solitude, and primitive and unconfined recreation from motorized vehicle use.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/Partial Wilderness* alternative, future exploration would be precluded on 16,280 acres of federal mineral estate by wilderness designation and all future mining, without valid existing rights, would also be precluded. Mining exploration and development would be allowed on 6,720 acres of private mineral estate.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would preclude future exploration projects on 16,280 acres of federal mineral estate in the designated area.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would not change existing opportunities for nonmotorized recreation use on 23,000 acres, as no motorized use presently occurs on this acreage. Nonmotorized use would increase from 200 VDY to 450 VDY.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not change existing opportunities for nonmotorized use on 23,000 acres.

IMPACTS ON WILDLIFE VALUES

The *Proposed Action/Partial Wilderness* would protect 22,050 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 15,220 acres (66.2 percent of the designated area, or 49.7 percent of the WSA) of crucial bighorn habitat (includes one-half (4,120 acres) of the Burns Spring lambing ground); 17,780 acres (77.3 percent of the designated area, or 58.1 percent of the WSA) of suitable peregrine falcon habitat and 22,050 acres (95.9 percent of the designated area or 72 percent of the WSA) of suitable habitat for the desert tortoise and Gila monster.

Mineral development and the subsequent increase in human activity would directly destroy 600 acres (2.7 percent of the designated area or two percent of the WSA) of crucial bighorn, suitable desert tortoise and Gila monster habitat. The loss of one desert bighorn sheep is anticipated. All of the above mentioned wildlife species adjacent to roads and mines would be negatively affected because of increased contacts with humans which often results in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Conclusion: The *Proposed Action/Partial Wilderness* would protect 15,220 acres of crucial bighorn habitat (includes 4,120 acres of lambing grounds), 17,780 acres of suitable peregrine falcon habitat, 22,050 acres of suitable desert tortoise and Gila monster habitat from further significant surface-disturbing activities.

Mineral development would adversely impact 600 acres of crucial bighorn, suitable Gila monster and desert tortoise habitat. The loss of one bighorn is anticipated.

IMPACTS ON CULTURAL RESOURCES

The *Proposed Action* would provide the additional protection of wilderness status. Vehicle travel, future mining and new road construction would be prohibited or limited. This alternative would reduce negative impacts to two prehistoric rock shelters, two old mines and a prehistoric campsite that are probably present in this WSA.

Conclusion: Two prehistoric rock shelters, two old mines and a prehistoric campsite that are probably present would be better protected.

AREA RECOMMENDED FOR USES OTHER THAN WILDERNESS

IMPACTS ON WILDERNESS VALUES

Wilderness values on the 7,600 acre portion of the WSA returned to other resource uses would not receive the legislative protection provided by wilderness designation. Over the long term, wilderness values would experience adverse impacts from mineral development and motorized vehicle use.

Three mining operations on claims with valid existing rights would cause extensive and long-term surface disturbance that would impair the natural character of 950 acres. Visitors' perception of naturalness would be lost or impaired over the large area of 2,200 acres—surrounding lands where visitors would be

directly subject to the sight and sound of mining, construction, roads and traffic. The increase in vehicle traffic is a direct result of equipment, personnel and ore transport related to mining.

Solitude and primitive recreation opportunities would also deteriorate around the 1000 acres subject to motorized vehicle traffic. The sights and sounds of motorized recreation use on these areas would lessen the quality of solitude and primitive recreation opportunities over a larger area of 2,500 acres.

Conclusion: Adverse impacts to wilderness values would not be prevented on the portion of the WSA not designated wilderness. Consequently, motorized vehicle use and mineral development would impair wilderness values on 62 percent of the undesignated portion of the WSA.

IMPACTS ON MINERAL DEVELOPMENT

Under the *Proposed Action/Partial Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

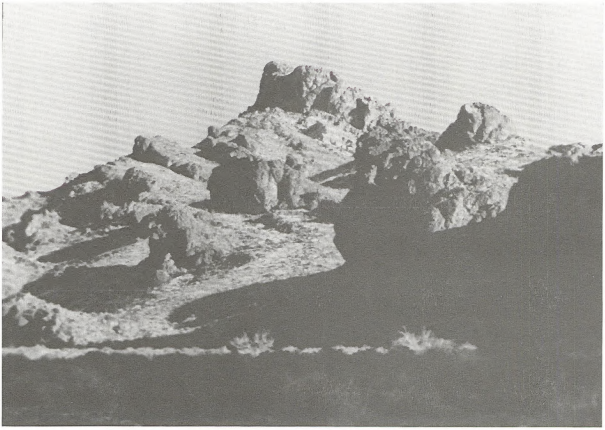
The *Proposed Action/Partial Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation use on 7,600 acres of the WSA. Motorized use would increase from 100 VDY to 200 VDY.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not affect recreation use on 7,600 acres of the WSA.

IMPACTS ON WILDLIFE VALUES

Mineral development would destroy in the nondesignated area 610 acres (8.0 percent of the nondesignated area or 1.9 percent of the WSA) of crucial bighorn habitat; 950 acres (12.5 percent of the nondesignated area or 4.7 percent of the WSA) of desert tortoise and Gila monster habitat; and, 310 acres of suitable peregrine falcon habitat (4.1 percent of the nondesignated or 1.6 percent of the WSA). The loss of one desert bighorn is anticipated.

The mining and associated roads would negatively affect these species because of increased contacts with humans which often results in harassment, collection and direct killing. These species



Black Mountains Ridgeline — Burns Springs WSA.

are expected to be reduced or eliminated within one-quarter to one-half mile of the disturbed sites. Although this area would receive some protection from surface-disturbing activities, such as ORV use, road construction, mine development and exploration, these activities will nonetheless degrade wildlife habitat as previously discussed. While quantification is not possible, this would result in the decrease in numbers and ranges of desert bighorn, desert tortoise and the Gila monster in this area.

Conclusion: A total of 610 acres of crucial bighorn habitat, 310 acres of peregrine falcon suitable habitat, and 950 acres of desert tortoise and Gila monster habitat would be destroyed by mineral development. The loss of one desert bighorn is anticipated.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values on portions of the WSA would be disturbed by mineral development, motorized vehicle use and water catchment construction.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of five mines would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 1,562 acres developed for minerals and road access.

All Wilderness Alternative (Map 2-3)

The *All Wilderness* alternative would designate 30,600 acres as wilderness.

Under this alternataive the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Burns Springs WSA would provide long-term legislative protection for its wilderness values. Wilderness values would benefit in certain areas because anticipated road construction and motorized vehicle recreation use would be excluded. However, under wilderness management, five mines (on mining claims that had proven discoveries or on nonfederal minerals) would be developed within the wilderness area in a manner affecting wilderness values.

Eliminating all motorized recreation use on 30,600 acres would benefit the wilderness values of solitude and primitive recreation on the 6,000 acres on which wilderness values are impaired by ORV use. Wilderness visitors would not encounter or hear motorized users in the 20 percent of the WSA presently affected by motorized use.

The natural character of one-quarter acre would be impaired by the development of two potholes or wildlife water catchments. Installed under strict wilderness management constraints, however, the facilities would blend in with their surroundings and be noticeable only upon direct encounter. There would be some brief losses of wilderness values during construction and periodic maintenance.

Development of five mines is anticipated whether the area is designated wilderness or not. Mining and eight miles of road construction would result in long-term loss of naturalness on 1,512 acres. The sights and sounds of mining and traffic would be visible and audible from surrounding areas; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired on 6,000 acres (20 percent).

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across 80.4 percent of the WSA by precluding motorized vehicle recreation and most development.

IMPACTS ON MINERALS DEVELOPMENT

Under *All Wilderness*, exploration would be limited to that accomplished prior to designation on the 22,280 acres of federal minerals, the 8,320 acres of private minerals would remain open to mineral development after designation.

Conclusion: The *All Wilderness* alternative would preclude future exploration projects on 22,280 acres of federal minerals.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use by closing 30,600 acres to motorized recreation use, thus displacing 200 VDY of motorized use. Nonmotorized recreation activities (day hiking, backpacking, wildlife observation and photography) on 30,600 acres within the area would benefit as a result.

Conclusion: The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation on 30,600 acres, and displace 200 VDY of motorized use.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 29,051 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 16,360 acres (96.4 percent of habitat in the WSA) of crucial bighorn habitat; one half (approximately 4,120 acres) of the Burns Spring lambing grounds; 18,850 acres (98.1 percent of habitat in the WSA) of suitable peregrine falcon habitat; and 29,051 acres (94.9 percent of suitable habitat in the WSA) of suitable habitat for the desert tortoise and Gila monster.

Mineral development and the subsequent increase in human activity would exclude bighorn from 600 acres (3.5 percent of habitat in the WSA) of their crucial habitat, and peregrine falcon from 350 acres (1.8 percent of habitat in the WSA) of their suitable habitat. The loss of one desert bighorn is anticipated. The eight miles of new roads along with the mines will directly destroy 1,512 acres (5.0 percent of habitat in the WSA) of suitable desert tortoise and Gila monster habitat. All of the above mentioned wildlife adjacent to roads and mines would be negatively affected because of increased contacts with humans which often results in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because of the closure to motorized use. Therefore, recreation related human contacts resulting in disturbances to wildlife would be minimal. This sharply contrasts with the increased human disturbance related to mineral development.

Conclusion: The *All Wilderness* alternative would protect 16,360 acres of crucial bighorn habitat, 18,850 acres of suitable peregrine falcon habitat, and 29,051 acres of suitable desert tortoise and Gila monster habitats from further significant surface-disturbing activities.

Mineral development would result in surface disturbances that would adversely impact 1,512 acres of suitable desert tortoise and Gila monster habitat; this includes 600 acres of crucial desert bighorn habitat and 350 acres of suitable peregrine falcon habitat. The loss of one bighorn is anticipated.

IMPACTS ON CULTURAL RESOURCES

This alternative is essentially the same as the *Proposed Action/Partial Wilderness*.

No other resources would be impacted under this alternative.

No Wilderness Alternative (Map 2-3)

The *No Wilderness* alternative would return 30,600 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Burns Springs WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience adverse impacts from motorized vehicle use, seven mining exploration programs, five anticipated mining ventures, and the construction of two wildlife water developments.

Mining exploration programs would result in five mining operations and their associated eight miles of road construction which would impair the natural character of 1,562 acres. Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over a larger area of 6,200 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Construction of the two water catchments would directly disturb the naturalness and solitude on one-quarter acre. Since these catchments would be concealed, the visitor's perception of them would not extend beyond the immediate one-quarter acre of disturbance.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by the mining development. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of development and vastly improved vehicular access are the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would experience a considerable decline around each of the five mines—results of road building and mining.

Because 30,600 acres would be open, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across 6,000 acres (20 percent) of the WSA. More motorized vehicle use would occur on the improved mine roads into little used areas. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience.

Conclusion: The *No Wilderness* alternative would not prevent any adverse impacts to wilderness values. As a result, motorized vehicle use, mining, road construction and water catchments would cause a loss or impairment of wilderness values of naturalness, solitude and primitive opportunities on 40 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *No Wilderness* alternative would impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation activities in the Burns Spring WSA. Motorized use would increase by 100 VDYs and nonmotorized by 70.

Conclusion: Opportunities for recreation use would remain unchanged under the *No Wilderness* alternative.

IMPACTS ON WILDLIFE VALUES

Under the *No Wilderness* alternative 30,600 acres would be returned to multiple use management under MFP decisions. While management under MFP decisions would provide the area with some control of surface disturbances caused by road construction, ORV use, mine development and mine exploration, these activities would impair habitats of desert bighorn, peregrine falcon, desert tortoise and the Gila monster. Increased human activity would disturb wildlife, and also result in wildlife harassment, collection and direct killing. This disturbance would result in the loss of one desert bighorn sheep.

Mine development and the subsequent increase in human activity would destroy 600 acres (3.5 percent of habitat in the WSA) of crucial bighorn habitat, 350 acres (1.8 percent of habitat in the WSA) of peregrine falcon suitable habitat, and 1,562 acres (5 percent of habitat in the WSA) of suitable desert tortoise and Gila monster habitat. These species are expected to be eliminated within one-quarter to one-half mile of disturbed sites.

Conclusion: Under the *No Wilderness* alternative 16,960 acres of crucial bighorn habitat (includes 4,120 acres of lambing grounds), 19,200 acres of suitable peregrine falcon habitat, and 30,600 acres of suitable desert tortoise and Gila monster habitat would be returned to multiple use management under the MFP decisions. These habitats would degrade because of increased surface-disturbing activities such as ORV use, road construction, and mine exploration and development.

Mine development would destroy 600 acres of crucial bighorn habitat, 350 acres of suitable peregrine falcon habitat and 1,562 acres of suitable desert tortoise and Gila monster habitat.

IMPACTS ON CULTURAL RESOURCE

The *No Wilderness* alternative would not provide the additional protection of wilderness status. Vehicle travel, future mining activity and new road construction would not be limited. This alternative would increase negative impacts to the cultural resources that are probably present.

Conclusion: Additional protection would not be provided for two prehistoric rock shelters, two old mines and a prehistoric campsite that are probably present.

No other resources would be impacted by this alternative.

MOUNT TIPTON WSA
(AZ-020-12/42) - 34,060 ACRES

Proposed Action/Partial Wilderness (Map 2-4)

The *Proposed Action/Partial Wilderness* for the Mount Tipton WSA would designate 28,170 acres as wilderness and return 5,890 acres for other resource uses. Boundary adjustments would eliminate an irregularly shaped appendage of WSA land which is isolated from the much more scenic main mass of the WSA. This nondesignated area also contains about 3,500 acres of high mineral potential areas and a projected mine.

Under this alternative the following environmental consequences are anticipated.

AREA PROPOSED FOR WILDERNESS DESIGNATION.

IMPACTS ON WILDERNESS VALUES

The *Proposed Action/Partial Wilderness* alternative would provide long-term legislative protection to wilderness values on 28,170 acres of the WSA. Wilderness values would benefit in certain areas because motorized vehicle use, an anticipated large open-pit mine, and the harvest of yucca would be excluded. Two open pit mines on mining claims with valid existing rights would be developed within the wilderness in a manner affecting wilderness values.

Wilderness would preclude one large open-pit mine (projected) and its associated two miles of access road construction would maintain the existing wilderness value of naturalness on 600 acres and sustain the perception of naturalness and opportunities for solitude and primitive recreation across 2,250 acres.

Two mining operations (with valid existing rights) and their associated three miles of road construction would cause extensive long-term surface disturbances that would impair the natural character of 355 acres. Visitors' perception of naturalness would also be lost or impaired over an area of 1,350 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

A right-of-way would be granted for access to a private inholding which would involve construction of 1.2 miles of access road and impairment of natural character on two acres. Visitor perception of naturalness would be lost or impaired over an area of 200 acres.

Developing two range improvement projects would disturb one-half acre but would not require access road construction. Natural character would thus be disturbed on a total of one-half acre and visitor perception of naturalness would be lost or impaired over an area of 40 acres.

Eliminating all motorized recreation use on 28,170 acres of wilderness would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not encounter or hear motorized users on the 800 acres of the designated portion of the WSA presently subject to the sights and sounds of motorized vehicles. All washes and trails would be available for only foot and horseback travel.

Four wildlife water (spring) developments would disturb one-quarter acre each. Access to these sites would not require road construction, so natural character would be disturbed on one acre. Design criteria would be such that no disturbance to the visitor's perception of the wilderness, quality of naturalness, solitude and primitive recreation would result outside this one acre of disturbance.

Elimination of a projected 280-acre Mohave yucca harvest area would benefit the wilderness values of naturalness, solitude and primitive recreation. Wilderness visitors would not encounter an area where most of the Yucca above three feet in height have been removed. Visitor perception of naturalness would be preserved over an area of 400 acres.

Opportunities for solitude and primitive recreation that would be preserved by wilderness designation include skill-testing cross-country treks, nontechnical rock climbing, birdwatching, some good horseback riding possibilities, photography and general sightseeing.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would maintain wilderness values on 96 percent of the WSA by preventing adverse impacts to naturalness, solitude, and primitive and unconfined recreation from mining developments, motorized vehicle use and the harvest of Mohave yucca.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/Partial Wilderness*, 19,250 acres of federal mineral estate would be withdrawn from mineral entry under the mining laws, precluding all future mineral exploration. Private minerals on 8,920 acres would remain open to mineral development.

Conclusion: The *Proposed Action/Partial Wilderness* would preclude future mineral exploration projects on 19,250 acres of federal mineral estate.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 28,170 acres by closing this land to motorized use and displacing 100 VDY of motorized recreation use to nearby public lands. Nonmotorized recreation would increase from 400 VDY to 800 VDY. Activities that would benefit are horseback riding, day hiking, sightseeing, overnight backpacking, wildlife observation and photography.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 28,170 acres by displacing 100 VDY of motorized recreation use to nearby public lands.

IMPACTS ON WILDLIFE VALUES

The *Proposed Action/Partial Wilderness* would protect 27,815 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 8,000 acres (100 percent in WSA) of suitable peregrine falcon and 22,186 acres (98.4 percent in WSA) of suitable Gila monster habitat.

Mineral development and the subsequent increase in human activity would impair 355 acres of Gila monster suitable habitat. Gila monsters living adjacent to roads and mines would be negatively affected because of increased contacts with humans which often results in harassment, collection and direct killing. This species is expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease significantly because recreational travel would be restricted to foot travel. Therefore, human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *Proposed Action/Partial Wilderness* would protect 27,815 acres of wildlife habitat, including 8,000 acres of suitable peregrine habitat and 22,186 acres of suitable Gila monster habitat from further significant surface-disturbing activities. Mineral development would impair 350 acres of Gila monster habitat.

IMPACTS ON VEGETATIVE SALES

Under the *Proposed Action/Partial Wilderness* 280 acres of Mohave yucca would be protected from harvest.

Denial of harvest within the WSA would have a slight economic impact on the local industry that harvests this plant for fertilizer. This impact would be small as there are many harvestable sections available outside the WSA.

Conclusion: The 280 acres of Mohave yucca would not be harvested.

IMPACTS ON CULTURAL RESOURCES

The rock shelter and prehistoric/historic camps would be protected from the direct impacts of surface impairment from

Hikers head down a wash in northern portion of Mount Tipton area.

motorized vehicles because recreational vehicle use would be prohibited. The cultural resources would also be protected from possible increased vandalism. Wilderness designation is viewed as generally beneficial for cultural resources.

Conclusion: Prehistoric/historic camps and a rock shelter would receive protection from surface disturbances related to motor vehicle use.

AREA RECOMMENDED FOR USES OTHER THAN WILDERNESS.

Wilderness values on the 5,890-acre portion of the WSA returned to other resource uses would not receive the legislative protection provided by wilderness designation. Over the long-term, wilderness values would experience adverse impacts from motorized vehicle use and the establishment of one open-pit mine.

One exploration program resulting in the establishment of an open-pit mine would impair the natural character of 600 acres (extensive long-term surface disturbance). Visitors' perception of naturalness would be lost or impaired over the 1,900 acres of surrounding lands where visitors would be directly subject to the sights of the mine.

Solitude and primitive recreation opportunities would also deteriorate in the area because motorized vehicle traffic would continue. The sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities over 600 acres.

Conclusion: Motorized vehicle use and establishment of an open-pit mine would impair wilderness values on 2,500 acres (42 percent of the area recommended for uses other than wilderness).

IMPACTS ON MINERAL DEVELOPMENT

The *Proposed Action/Partial Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation use on 5,890 acres of the WSA, although motorized recreation use levels would increase slightly because of displacement of motorized recreationists from the wilderness portion of the area.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not change opportunities for recreation use on 5,890 acres of the WSA.

IMPACTS ON WILDLIFE VALUES

In this area, 600 acres of suitable Gila monster habitat would be destroyed by mineral development. The mining and associated roads would negatively affect this species because of increased contacts with humans which often results in harassment, collection and direct killing. This species is expected to be reduced or eliminated within one-quarter to one-half mile of the disturbed area. This acreage as well as the other 5,290 acres not being developed by the mining industry would be returned to other resource uses under the MFP decisions. Although this area would receive some protection from surface disturbing activities (ORV use, road construction, mine development and exploration), these activities would nonetheless degrade wildlife habitat as previously discussed. While quantification is not possible, this would result in the decrease in numbers and range of the Gila monster in this area.

Conclusion: A total of 600 acres of Gila monster habitat would be destroyed.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values on portions of the WSA would be disturbed by mineral development, motorized vehicle use and grazing and wildlife water development construction.

Potential mining developments would be denied on 600 acres.

RELATIONSHIP BETWEEN LOCAL AND SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of three mines would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 957 acres developed for minerals.

All Wilderness Alternative (Map 2-5)

The *All Wilderness* alternative would designate 34,060 acres as wilderness.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Mount Tipton WSA would provide long-term legislative protection for its wilderness values because motorized vehicle use and 252 acres of mining would be excluded. However, under wilderness management, three

mines (on mining claims that had proven discoveries or on nonfederal minerals) would be developed within the wilderness in a manner affecting wilderness values.

Precluding 252 acres of mining disturbance would maintain the existing wilderness value of naturalness. Moreover, the perception of naturalness would be preserved and the quality and solitude and primitive recreation opportunities sustained across 900 acres.

Eliminating all motorized recreation use on the 1,400 acres presently accessible to motor vehicles would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not encounter or hear motorized users in the four percent of the WSA presently affected by motorized use.

Because of valid existing rights, development of three mines is anticipated whether the area is designated wilderness or not. Mining and five miles of road construction would result in long-term loss of naturalness on 957 acres. The sights and sounds of mining and traffic would be visible and audible from the surrounding area; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired on 3,600 acres.

A right-of-way would be granted for access to a private inholding. This would involve construction of 1.2 miles of access road and impairment of natural character on two acres. Visitor perception of naturalness would be lost or impaired over an area of 200 acres.

Two range improvement projects would each disturb one-quarter acre, but access would not require road construction. Natural character would thus be disturbed on a total of 0.5 acre. Visitor perception of naturalness would be lost or impaired over an area of 40 acres.

Four wildlife water (spring) developments would each disturb one-quarter acre, but access would not require road construction. Natural character would thus be disturbed on a total of one acre. Design criteria would be such that no disturbance to the visitor's perception of the wilderness, quality of naturalness, solitude and primitive recreation would result outside this one acre of total disturbance.

Elimination of a projected 280-acre Mohave yucca harvest area would benefit the wilderness values of naturalness, solitude and primitive recreation. Wilderness visitors would not encounter an area where most of the Yucca above three feet in height have been removed. Visitor perception of naturalness would be preserved over an area of 400 acres.

Conclusion: The *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across 92 percent of the WSA by precluding motorized vehicle recreation, harvest of Mohave yucca and some mining.

IMPACTS ON MINERALS DEVELOPMENT

Wilderness designation would exclude all future exploration and mining without a valid discovery prior to the inclusion into the wilderness system on 23,560 acres of federal mineral estate.

Conclusion: The *Proposed Action/All Wilderness* alternative would preclude future exploration projects on 23,560 acres of federal mineral estate.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use by closing 34,060 acres to vehicle use, thus displacing 150 VDY of motorized use. Nonmotorized recreation activities (day hiking, backpacking, horseback riding and photography) on 34,060 acres within the area would benefit as a result, increasing from 400 VDY to 800 VDY.

Conclusion: The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation on 34,060 acres and displace 150 VDY of motorized use.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 33,105 acres of wildlife habitat from further significant surface disturbing activities such as mineral exploration and ORV use. It would protect 8,000 acres of suitable peregrine falcon habitat and 27,469 acres of suitable habitat for the Gila monster.

Mineral development and the subsequent increase in human activity would destroy 957 acres (2.8 percent of the WSA) of Gila monster habitat. Gila monsters adjacent to roads and mines would be negatively affected because of increased contacts with humans which often result in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because recreational travel would be restricted to foot travel. Therefore, human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *All Wilderness* alternative would protect 33,105 acres of wildlife habitat (8,000 acres of suitable peregrine habitat, and 27,469 acres of suitable Gila monster habitat) from further significant surface-disturbing activities. Mineral development would impair 957 acres of suitable Gila monster habitat.

IMPACTS ON VEGETATIVE SALES

Under the *All Wilderness* alternative 280 acres of Mohave yucca in the WSA would be protected from harvest.

Denial of harvest within the WSA would have a slight economic impact on the local industry that harvests this plant for fertilizer. This impact would be small as there are many harvestable sections available outside the WSA.

Conclusion: The 280 acres of Mohave yucca would be protected from harvest.

IMPACTS ON CULTURAL RESOURCES

This alternative would have the same results as *Proposed Action/Partial Wilderness* since all of the known cultural resources were included in the partial area recommended for designation.

No other resources would be impacted by this alternative.

No Wilderness Alternative (Map 2-5)

The *No Wilderness* alternative would return 34,060 acres to other resource uses.

IMPACTS ON WILDERNESS VALUES

None of Mount Tipton WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience adverse impacts from motorized vehicle use, mining exploration programs, two anticipated mining ventures, construction of four wildlife waters (spring developments), two livestock waters, harvest of Mohave yucca and construction of road to access private inholdings.

Because the entire 34,060 acres would be open to ORV use, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across seven percent of the WSA — the 1,400 acres now used by ORV recreationists. Improved mine road access on five miles of new road would permit vehicles to traverse or reach portions of the WSA (1,000 additional acres - 2 percent) infrequently or never visited by motor-dependent recreationists. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience.

Mining exploration programs would result in two mining operations and associated five miles of road construction which would impair the natural character of 1,207 acres. Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over a larger area of 4,150 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction roads and traffic.

Four new wildlife water (spring) developments would each disturb one-quarter acre, but access would not require road construction. Natural character would thus be disturbed on a total of one acre. Design criteria would be such that no disturbance to the visitor's perception of the wilderness qualities of naturalness, solitude and primitive recreation would result outside this one acre of total disturbance.

Two new range improvement projects would each disturb 0.25 acre, but access would not require road construction. Natural character would thus be disturbed on a total of 0.5 acre. Visitor perception of naturalness would be lost or impaired over an area of 40 acres.

A right-of-way for access to a private inholding would involve construction of 1.2 miles of access road, thus impairing natural character on two acres. Visitor perception of naturalness would be lost or impaired over an area of 200 acres.

A projected Mohave yucca harvest on the western edge would directly impact 280 acres and would impair visitor perception of naturalness on a greater area of 400 acres.

Conclusion: The *No Wilderness* alternative would not prevent any adverse impacts to wilderness values. As a result, motorized vehicle use, mining, road construction, wildlife waters, range improvements, right-of-way road access development and Mohave yucca harvest would cause a loss of impairment of wilderness values of naturalness, solitude and primitive opportunities on 21 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation activities in the Mount Tipton WSA. Both motorized and non-motorized recreational use would increase by 50 VDYs.

Conclusion: Opportunities for recreation use would remain unchanged under the *No Wilderness* alternative.

IMPACTS ON WILDLIFE VALUES

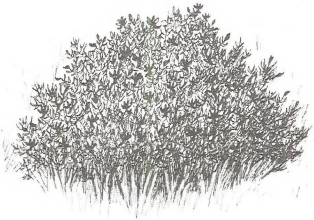
Under the *No Wilderness* alternative 34,060 acres would be returned to other multiple uses under MFP decisions. This area would receive some protection from road construction, ORV use, mine development and mine exploration, but these activities would degrade suitable habitats of the peregrine falcon and the

Gila monster by increasing human activity and disturbance to wildlife. This often results in harassment, collection and direct killing. While quantification is not possible, this disturbance would result in the decrease in numbers and ranges of peregrine falcon (affecting 8,000 acres of suitable habitat), and the Gila monster (affecting 28,426 acres of suitable habitat).

ORV use would increase and the use of motorized vehicles would have the same effects on wildlife as discussed above.

Mine development and the subsequent increase in human activity would destroy 1,207 acres of suitable Gila monster habitat. This species is expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Conclusion: Under the *No Wilderness* alternative 8,000 acres of suitable peregrine falcon habitat and 28,426 acres of suitable Gila monster habitat would be returned to multiple use management under the MFP decisions. These habitats would degrade because of increased surface-disturbing activities, such as ORV use, road construction and mine exploration and development. Mine development would destroy 1,207 acres of suitable Gila monster habitat.



IMPACTS ON VEGETATIVE SALES

Under the *No Wilderness* alternative 280 acres of Mohave yucca would be harvested. This would temporarily eliminate 90 percent of the estimated seed- producing Mohave yuccas in the harvest area. Under this alternative the harvest industry's planned harvest would be unaffected.

Conclusion: The 280 acres of Mohave yucca would be harvested.

IMPACTS ON CULTURAL RESOURCES

This alternative would not provide the additional protection of wilderness status. Vehicle travel, future mining activities and new road construction would increase negative impacts to the prehistoric/historic camp sites and the rock shelter site. Although visitor use would not increase, the lack of wilderness designation is adverse for cultural resources.

Conclusion: Prehistoric/historic camps and a rock shelter would be subject to impairment from such surface disturbance as mineral and road development and recreational ORV use.

No other resources would be impacted by this alternative.

GRAPEVINE WASH WSA
(AZ-020-14) - 2,200 ACRES

Proposed Action/No Wilderness Alternative
(Map 2-7)

The *Proposed Action/No Wilderness* alternative would return 2,200 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Grapevine-Wash WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long-term, wilderness values in certain areas would experience adverse impacts from one mining exploration program and one anticipated mining venture.

The mining exploration program would result in one mining operation and its associated one mile of road construction which would impair the natural character of 301 acres. Presently, these areas have no evidence of mining. Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over the larger area of 2,200 acres (100 percent of the unit)—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by mining. Hiking and sightseeing opportunities would experience a considerable decline around the open pit mine—a result of road building and mining. The sights and sounds of mine development and the building of vehicular access would be the primary factors causing deterioration of naturalness and scenic features.

Because the entire unit would be open to ORV use, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across 50 percent of the WSA and increase the chances of nonmotorized recreationists meeting vehicles. Improved mine road access on

one mile of new road would permit vehicles to reach portions of the WSA never visited by vehicle-dependent recreationists.

Conclusion: The *No Wilderness* alternative would not prevent any adverse impacts to wilderness values. As a result, motorized vehicle use, mining, and road construction would cause a loss or impairment of wilderness values of naturalness, solitude and primitive opportunities on 100 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation activities in the Grapevine Wash WSA.

Conclusion: Opportunities for recreation use would remain unchanged under the *No Wilderness* alternative.

IMPACTS ON WILDLIFE VALUES

Under the *No Wilderness* alternative 2,200 acres would be returned to management under MFP decisions. Although this area would receive some protection from road construction, ORV use, mine development and mine exploration, these activities nonetheless would degrade habitats of desert bighorn and Gila monster by increasing human activity and disturbance to wildlife. This often results in harassment, collection and direct killing. While quantification is not possible, this disturbance would result in the decrease in numbers and ranges of desert bighorn (affecting 2,200 acres of crucial habitat), and the Gila monster (affecting 2,200 acres of suitable habitat).

ORV use would increase and the use of motorized vehicles would have the same effects on wildlife as discussed above.

Mine development and the subsequent increase in human activity would destroy 301 acres (13.7%) of crucial bighorn habitat, and 301 acres (13.7%) of suitable Gila monster habitat. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Conclusion: Under the *No Wilderness* alternative 2,200 acres of crucial bighorn and suitable Gila monster habitat would be returned to other multiple uses under the MFP decisions. These habitats would degrade because of increased surface-disturbing activities such as ORV use, road construction and mine exploration and development. Mine development would destroy 301 acres of crucial bighorn and suitable Gila monster habitat.

IMPACTS TO CULTURAL RESOURCES

Under this alternative, none of the WSA acres would be designated wilderness. Surface disturbance from one 300-acre mine and ORV use could adversely impact two roasting pit sites. Visitor use would increase risk of vandalism to the sites.

Conclusion: Two roasting pit sites would receive less protection from ORV use, vandalism and mineral development.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values on portions of the WSA would be disturbed by mineral development and motorized vehicle use.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of one mine would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 301 acres developed for minerals and road access.

All Wilderness Alternative (Map 2-7)

The *All Wilderness* alternative would designate 2,200 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Grapevine Wash WSA would provide long-term legislative protection for its wilderness values. Wilderness values would benefit in certain areas because anticipated road construction, motorized vehicle use and some mining would be excluded.

Precluding mineral exploration and the development of one medium mine would maintain the existing wilderness value of naturalness on 301 acres. Moreover, the perception of naturalness would be preserved and the quality and solitude and primitive recreation opportunities sustained across 2,200 acres.

Continuing to exclude all motorized recreation use on 2,200 acres would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not see or hear motorized users.

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across all of the WSA by precluding a mining operation and excluding motorized recreation.

IMPACTS ON MINERALS DEVELOPMENT

Under *All Wilderness* the exploration projects and the development of the minerals resources in the area would be denied.

Conclusion: *All Wilderness* would stop the development of one medium open pit mine employing 25 people.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would not change existing opportunities for nonmotorized recreation use on 2,200 acres, as no motorized use presently occurs on the acreage.

Conclusion: The *All Wilderness* alternative would not change existing opportunities for nonmotorized use on 2,200 acres.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 2,200 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 2,200 acres (100%) of crucial bighorn habitat and 2,200 acres (100%) of suitable habitat for the Gila monster.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because recreational travel would be restricted to foot travel. Therefore, human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *All Wilderness* alternative would protect 2,200 acres of crucial bighorn habitat and 2,200 acres of suitable Gila monster habitat from further significant surface-disturbing activities.

IMPACTS ON CULTURAL RESOURCES

This alternative would provide some protection for the known cultural resources. The vehicle travel limitation would protect the roasting pit sites from ORV use and possible vandalism.

Although BLM actions are not planned for this WSA, wilderness designation would limit future activities and generally be beneficial for the preservation of these unusual sites.

Conclusion: Two roasting pit sites would be better protected under this alternative.

No other resources would be impacted by this alternative.

GRAND WASH CLIFFS WSA (AZ-020-15) - 12,176 ACRES

Proposed Action/No Wilderness Alternative (Map 2-7)

The *Proposed Action/No Wilderness* alternative would return 12,176 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Grand Wash Cliffs WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience adverse impacts from motorized vehicle use, four mining exploration programs, one anticipated mining venture, proposed range improvements and the construction of a wildlife water catchment.

Four mining exploration programs would result in one mining operation and an associated 0.6 mile of road construction which would impair the natural character of 51 acres. (Presently, these areas have no evidence of mining and are reached by unmaintained and barely discernible vehicle trails.) Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over a larger area of 1,000 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Construction of one wildlife water catchment would directly disturb the naturalness and solitude on one-quarter acre. The visitor's perception of these wilderness qualities would be impaired over less than one acre because the catchment would be designed to be nonintrusive on the natural scene.

Construction of one livestock water development would directly impair the naturalness and solitude on one-half acre and the visitor's perception of solitude and naturalness over the 200 acres from which it would be visible. A 110-acre prescribed burn to modify vegetation types would impair the wilderness value of naturalness over the entire burn area.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by the mining, range improvements and water catchment development. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of development and improved vehicular access are the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would experience a considerable decline around the new underground mine—a result of road building and mining. These lost opportunities are mostly offset by the abundance of similar opportunities throughout the region.

Because 12,176 acres would be open, the sights and sounds of motorized recreation use would lessen the quality of solitude

and primitive recreation opportunities across the 20 percent of the WSA accessible to ORVs. Improved mine road access on 0.6 miles of new road would permit vehicles to traverse or reach a portion of the WSA never visited by motor-dependent recreationists. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience.

Conclusion: The *No Wilderness* alternative would not prevent adverse impacts to wilderness values. As a result, motorized vehicle use, mining, road construction and water catchments would cause a loss or impairment of wilderness values of naturalness, solitude and primitive opportunities on 30 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation activities in the Grand Wash Cliffs WSA.

Conclusion: Opportunities for recreation use would remain unchanged under the *No Wilderness* alternative.

IMPACTS ON WILDLIFE VALUES

Under the *No Wilderness* alternative 12,176 acres would be returned to other multiple uses under MFP decisions. Although this area would receive some protection from road construction, ORV use, mine development and mine exploration, these activities nonetheless would degrade suitable habitats of the peregrine falcon and the Gila monster by increasing human activity and disturbance to wildlife. This often results in harassment, collection and direct killing. While quantification is not possible, this disturbance would result in the decrease in numbers and ranges of peregrine falcon (4,480 acres of suitable habitat) and the Gila monster (12,176 acres of suitable habitat).

ORV use would increase, causing the same effects on wildlife as discussed above.

Mine development and the subsequent increase in human activity would impair 51 acres (1.3% of habitat in WSA) of peregrine falcon suitable habitat and 51 acres (0.4% of habitat in WSA) of suitable Gila monster habitat. These species would be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Conclusion: Under the *No Wilderness* alternative 4,480 acres of suitable peregrine falcon habitat, and 12,176 acres of suitable Gila monster habitat would be returned to other multiple uses under the MFP decisions. These habitats would degrade because of increased surface-disturbing activities such as ORV use, road construction and mine exploration and development. Mine development would destroy 51 acres of suitable peregrine habitat, and 51 acres of suitable Gila monster habitat.

IMPACTS ON CULTURAL RESOURCES

This alternative would not provide additional protection for two large roasting pits, two prehistoric campsites and a prehistoric rock shelter that are probably present. Vehicle travel, future mining activity and new road construction would increase negative impacts to these sites.

Conclusion: Two large roasting pits, two prehistoric campsites and a prehistoric rock shelter would not be better protected.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values on portions of the WSA would be disturbed by mineral development, motorized vehicle use and livestock and wildlife developments.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of one mine would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 51 acres developed for minerals and road access.

All Wilderness Alternative (Map 2-7)

The *All Wilderness* alternative would designate 12,176 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Grand Wash Cliffs WSA would provide long-term legislative protection for its wilderness values. Wilderness values would benefit in certain areas because

anticipated road construction, motorized vehicle use and some mining would be excluded. One mine (on mining claims that had proven discoveries) would be developed within the wilderness in a manner affecting wilderness values.

Eliminating all motorized recreation use on 12,176 acres would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not see or hear motorized users in the 2,400 acres (20%) of the WSA presently used by vehicles.

The natural character of one-quarter acre would be impaired by the development of a pothole or wildlife water catchment. Installed under strict wilderness management constraints, however, the facilities would blend in with their surroundings and be noticeable only upon direct encounter. There would be some brief disturbance during construction and periodic maintenance.

Development of one underground mine is anticipated whether the area is designated wilderness or not. Mining and one mile of road construction would result in long-term loss of naturalness on 51 acres. The sights and sounds of mining and traffic would be visible and audible from the surrounding area; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired on 1,000 acres.

Construction of one livestock water development would directly impair the naturalness and solitude on one-half acre and the visitor's perception of solitude and naturalness over the 200 acres from which it would be visible. A 110-acre prescribed burn to modify vegetation types would impair the wilderness value of naturalness over the entire burn area for the short term, but natural revegetation would restore naturalness over the long term.

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across 90.1 percent of the WSA by precluding some mineral development and motorized vehicle recreation.

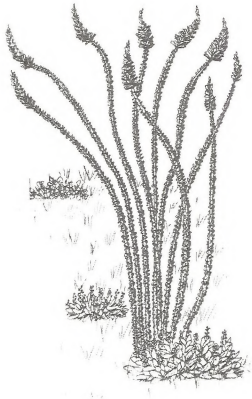
IMPACTS ON MINERALS DEVELOPMENT

Under *All Wilderness*, 7,696 acres of federal mineral estate would be withdrawn from mineral entry, precluding future mineral exploration projects and not allowing the full utilization of the resource. Private mineral estate on 4,480 acres would remain open.

Conclusion: The *All Wilderness* alternative would preclude future mineral exploration projects on 7,696 acres of federal mineral estate.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use by closing 12,176 acres, thus displacing 120 VDY of motorized use. Nonmotorized recreation activities (day hiking, backpacking and horseback riding)



on 12,176 acres within the area would benefit as a result, increasing from 30 VDY to 80 VDY.

Conclusion: The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation on 12,176 acres, and would displace 120 VDY of motorized use.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 12,125 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 4,429 acres (98.6%) of suitable peregrine falcon habitat, and 12,125 acres (99.5%) of suitable habitat for the Gila monster.

Mineral development and the subsequent increase in human activity would destroy 51 acres (1.3%) of peregrine falcon suitable habitat and 51 acres (0.4%) of suitable Gila monster habitat. Any of these species adjacent to roads and mines would be negatively affected because of increased contacts with humans which often results in harassment, collection and direct killing. These species would be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

While mineral related human disturbance would increase, recreational impacts to wildlife are expected to decrease because of a projected reduction in visitor use days and the restriction of recreational vehicle use. With recreational travel restricted to foot travel, recreation-related human contacts and disturbances to wildlife would be minimal.

Conclusion: The *All Wilderness* alternative would protect 12,125 acres of wildlife habitat from further significant surface disturbing activities. This includes 4,429 acres of suitable peregrine habitat and 12,125 acres of Gila monster habitat. Because of valid existing mining rights, 51 acres of suitable peregrine habitat and 51 acres of suitable Gila monster habitat would be destroyed.

IMPACTS ON CULTURAL RESOURCES

This *All Wilderness* alternative would provide additional protection for the cultural resources that are probably present. Vehicle travel, mining activity and new road construction would be limited or prohibited.

Conclusion: Two large roasting pits, two prehistoric campsites and a prehistoric rock shelter that are probably present would be better protected.

No other resources would be impacted by this alternative.

MOUNT DAVIS WSA
(AZ-020-21) - 2,560 ACRES

Proposed Action/No Wilderness Alternative (Map 2-1)

The *Proposed Action/No Wilderness* alternative would return 2,560 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Mount Davis WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience adverse impacts from motorized vehicle use, two mining exploration programs, one anticipated mining venture and the construction of a wildlife water catchment.

Mining exploration programs would lead to development of one mining operation and its associated two miles of road construction which would impair the natural character of 303 acres. (Presently, this area has no evidence of mining and is only reached by nonmotorized travel.) Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over all of section 30 (640 acres) — surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Construction of a wildlife water catchment would directly disturb the naturalness and solitude on one-quarter acre. Because the catchment would be concealed, these wilderness qualities would not extend outside the area occupied by the catchment.

The existing quality and array of primitive recreation opportunities, as well as the loss of naturalness and scenic features, would decline on WSA areas adversely affected by the mining. The sights and sounds of development and vastly improved vehicular access would be the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would experience a considerable decline in section 30—a result of road building and mining. These lost opportunities are mostly offset by the abundance of similar opportunities elsewhere in the region.

Because 2,560 acres and two miles of mine roads would be open, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across the 25 percent of the WSA which would be accessible to motor vehicles. Improved mine road access on two miles of new road would permit vehicles to traverse or reach portions of the WSA never visited by motor-dependent recreationists. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience in section 30.

Conclusion: The *No Wilderness* alternative would not prevent any adverse impacts to wilderness values. As a result, motorized vehicle use, mining, road construction and water catchments would cause a loss or impairment of wilderness values of naturalness, solitude and primitive opportunities on 50 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would allow construction of a mine access road to section 30, thus providing new recreation opportunities not presently available in the WSA. This alternative would not change existing opportunities for motorized and nonmotorized recreation activities in the other three sections of the Mount Davis WSA.

Conclusion: Opportunities for recreation use would remain unchanged in 75 percent of the WSA, and ORV recreation opportunities would be enhanced in section 30.

IMPACTS ON WILDIFE VALUES

Under the *No Wilderness* alternative 2,560 acres would be returned to other multiple uses under MFP decisions. Although this area would receive some protection from road construction,

ORV use, mine development and mine exploration, these activities would nonetheless degrade habitats of desert bighorn, desert tortoise and the Gila monster by increasing human activity and disturbance to wildlife. This often results in harassment, collection and direct killing. While quantification is not possible, this disturbance would decrease the numbers and ranges of desert bighorn (affecting 2,460 acres of crucial habitat including 700 acres of the Mount Davis lambing grounds) and the desert tortoise and Gila monster (affecting 2,560 acres of suitable habitat).

ORV use would increase and motorized vehicles would have the same effects on wildlife as discussed above.

Mine development and the subsequent increase in human activity would destroy 303 acres (12.1% in the WSA) of crucial bighorn habitat and 303 acres (11.7% in the WSA) of suitable desert tortoise and Gila monster habitat. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Conclusion: Under the *No Wilderness* alternative 2,460 acres of crucial bighorn habitat and 2,560 acres of suitable desert tortoise and Gila monster habitat would be degraded because of increased surface-disturbing activities, such as ORV use, road construction, and mine exploration and development. Mine development would destroy 303 acres of crucial bighorn habitat and 303 acres of suitable desert tortoise and Gila monster habitat.

IMPACTS ON CULTURAL RESOURCES

This alternative would not provide additional protection for two prehistoric campsites and a prehistoric rock shelter that are probably present. Vehicle travel, mining activity and new road construction would increase negative impacts to these sites.

Conclusion: Two prehistoric campsites and a prehistoric rock shelter that are probably present would not be better protected.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values on portions of the WSA would be disturbed by mineral development, motorized vehicle use and water catchment construction.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of one mine would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 303 acres developed for mining and road access.

All Wilderness Alternative (Map 2-1)

The *All Wilderness* alternative would designate 2,560 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Mount Davis WSA would provide long-term legislative protection for its wilderness values—values that would benefit in certain areas because motorized vehicle use would be legislatively excluded. However, under wilderness management, one mine (on mining claims that had proven discoveries) would be developed within the wilderness in a manner affecting wilderness values.

Eliminating all motorized recreation use on 2,560 acres would continue to benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not see or hear motorized users in the southern three sections of the WSA (75% of the total area).

The natural character of one-quarter acre would be impaired by the development of a pothole or wildlife water catchment. Installed under strict wilderness management constraints, however, the facilities would blend in with their surroundings and be noticeable only upon direct encounter. There would be some brief disturbances during construction and periodic maintenance.

Development of one mine is anticipated whether the area is designated wilderness or not. Mining and two miles of road construction would result in long-term loss of naturalness on 303 acres. The sights and sounds of mining and traffic would be visible and audible throughout section 30; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired on 640 acres.

Conclusion: Wilderness designation under the All Wilderness alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across 75 percent of the WSA by precluding motorized vehicle recreation and some mining.

IMPACTS ON MINERALS DEVELOPMENT

The *All Wilderness* designation would exclude all future mineral exploration.

Conclusion: *All Wilderness* would preclude future mineral exploration projects.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would not change existing opportunities for nonmotorized recreation use on 2,560 acres, as no motorized use presently occurs on this acreage.

Conclusion: The *All Wilderness* alternative would not change existing opportunities for nonmotorized use on 2,560 acres.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 2,560 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration. It would protect 2,157 acres (87.8%) of crucial bighorn habitat (includes 700 acres of the Mount Davis lambing grounds) and also 2,257 acres (91.8%) of suitable habitat for the desert tortoise and Gila monster.

Mineral development and the subsequent increase in human activity would destroy 303 acres (12.1%) of bighorn crucial habitat. The loss of one desert bighorn is anticipated. The three miles of new roads, along with the mines, would directly destroy 303 acres (11.7%) of suitable desert tortoise and Gila monster habitat. Any of these species adjacent to roads and mines would be negatively affected because of increased contacts with humans which often results in harassment, collection and direct killing. These species would be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because recreational travel would be restricted to foot travel. Therefore, human contacts which often results in disturbances to wildlife would be minimal. This contrasts sharply with the increased wildlife disturbance caused by human mining-related activity.

Conclusion: The *All Wilderness* alternative would protect 2,157 acres of crucial bighorn habitat, and 2,257 acres of desert tortoise and Gila monster habitat from further significant surface-disturbing activities. Because of valid existing mining rights, 303 acres of crucial bighorn habitat and 303 acres of desert tortoise and Gila monster habitat would be destroyed. The loss of one bighorn is anticipated.

IMPACTS ON CULTURAL RESOURCES

This alternative would provide additional protection for the cultural resources that are probably present. Vehicle travel, mining activity and new road construction would be limited or prohibited.

Conclusion: Two prehistoric campsites and a prehistoric rock shelter that are probably present would be better protected.

No other resources would be impacted by this alternative.

MOUNT NUTT WSA (AZ-020-024) - 29,190 ACRES

Proposed Action/Partial Wilderness (Map 2-8)

The *Proposed Action/Partial Wilderness* for the Mount Nutt WSA would designate 27,210 acres as wilderness and 1,980 acres for other resource uses. This alternative differs from the *All Wilderness* alternative in that boundary adjustments would remove most of an irregularly shaped appendage of land which is isolated from the main mass of the WSA. This eliminated area also contains a 2.5 mile segment of a large coal slurry pipeline and associated maintenance trail, some high mineral potential areas and a projected medium sized open-pit mine. Another small area in the north-central portion of the WSA (currently undergoing intensive mineral exploration preliminary to a probable medium sized open pit mine) would also be removed. A very small tract at the southeast corner of the WSA would also be removed. A jeep trail in this area allows for the only practical access to a patented mining claim outside of the WSA, but surrounded by the same on three sides.

Under this alternative the following environmental consequences are anticipated.

AREA PROPOSED FOR WILDERNESS DESIGNATION

IMPACTS ON WILDERNESS VALUES

The *Proposed Action/Partial Wilderness* alternative would provide long-term legislative protection for wilderness values on 27,210 acres of the WSA. Wilderness values would benefit in certain areas because motorized vehicle use and harvest of

Mohave yucca would be excluded. However, whether or not the WSA is designated, three mines on mining claims with valid existing rights and two mines on private mineral estate would be developed within the WSA in a manner affecting wilderness values.

Five mining operations on public land (and their associated four miles of road construction) would cause extensive and long-term surface disturbances that would impair the natural character of 408 acres. Visitors' perception of naturalness would also be lost or impaired over an area of 1,850 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Periodic maintenance activities on the Oatman water pipeline from Flag Springs (pipe replacement, repair and monitoring) would not impair the natural character of the area. Impacts to visitors' perceptions of naturalness and solitude would result only during the actual periods of maintenance.

Several existing range improvement projects would be maintained and two additional range improvement projects would be developed. The 3.5 miles of new fenceline would disturb three acres. The 1.8 miles of buried water pipeline would be constructed from an existing project and would disturb two acres. Access to those developments would not require road construction. Visitors' perceptions of naturalness would be lost or impaired over a total area of 20 acres.

Bighorn Cave, an archeological site, would be excavated using the minimum tool policy guidance. The disturbance to areas outside of the cave would be negligible. Visitors' perceptions of the wilderness qualities of naturalness and solitude would be disturbed in the area surrounding the cave, its access trail and temporary field camp during periods of excavation only.

Eliminating all motorized recreation use on 27,210 acres of wilderness would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not see or hear motorized users on the 3,000 acres of the designated portion of the WSA presently used by vehicles. All washes and trails would be available for foot and horseback travel only.

Six existing wildlife water developments would be maintained and four additional wildlife water developments would be constructed. Each development would disturb one-quarter acre but access to the sites would not require road construction. Natural character would thus be disturbed on a total of one acre. Design criteria would be such that no disturbance to visitors' perceptions of the wilderness qualities of naturalness and solitude would result outside of this one acre of total disturbance.

Elimination of a projected 630 acres of Mohave yucca harvest areas would benefit the wilderness values of naturalness, solitude and primitive recreation. Wilderness visitors would not encounter an area where most of the Yucca above three feet in height have been removed. Visitors' perceptions of naturalness would be preserved over an area of 1,200 acres.

Opportunities for solitude and primitive recreation that would be preserved by wilderness designation include skill-testing cross-country treks, wildlife observation, photography and sightseeing.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would maintain wilderness values on 86.8 percent of the designated portion of the WSA by preventing adverse impacts to naturalness, solitude, and primitive and unconfined recreation from motorized vehicle use and the harvest of Mohave yucca.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/Partial Wilderness*, 23,049 acres of federal mineral estate would be withdrawn from mineral entry, denying exploration projects on federal mineral estate, but not stopping the development of three open-pit mines and two underground mine.

Conclusion: The *Proposed Action/Partial Wilderness* would deny exploration projects on federal mineral estate, but would not impede the development of three open-pit mines and two underground mines.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 27,210 acres by closing the area to ORV use and displacing 1,100 VDY of motorized recreation use to nearby public lands. Nonmotorized recreation activities that would benefit are horseback riding, day hiking, sightseeing, overnight backpacking, wildlife observation and photography, increasing from 1,200 VDY to 2,800 VDY.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 27,210 acres by displacing 1,200 VDY of motorized recreation use to nearby public lands.

IMPACTS ON WILDLIFE VALUES

The *Proposed Action Partial Wilderness* would protect 26,780 acres of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 20,310 acres (97.9%) of the designated area or 88.4% of the WSA) of crucial bighorn habitat (including 8,000 acres of the 8,480 acre Mount Nutt lambing grounds); 22,770 acres (98.5% of the designated area or 87.8% of the WSA) of suitable peregrine falcon habitat and 26,780 acres (98.4% of the designated area or 91.7% of the WSA) of suitable habitat for the desert tortoise and Gila monster.

Mineral and access road development and the subsequent increase in human activity would destroy 408 acres (1.5% of the designated area or 1.4% of the WSA) that is bighorn crucial habitat and suitable desert tortoise and Gila monster habitat and

380 acres (1.4% of the designated area or 1.3% of the WSA) of peregrine falcon suitable habitat. The loss of one desert bighorn is anticipated. Any of these species adjacent to roads and mines would be negatively affected because of increased contacts with humans which often results in harassment, collection and direct killing. These species would be reduced or eliminated within one-quarter to one-half mile of disturbed sites.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because recreational travel would be restricted to foot travel. Therefore, human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *Proposed Action/Partial Wilderness* would protect 26,780 acres of wildlife habitat—20,310 acres of crucial bighorn habitat (including 8,000 acres of lambing grounds), 22,770 acres of suitable peregrine falcon habitat, and 26,780 acres of desert tortoise and Gila monster suitable habitat—from further significant surface-disturbing activities.

Mineral development would impair 408 acres of special-status wildlife habitat. This includes 408 acres of crucial desert bighorn habitat and 380 acres of suitable peregrine falcon habitat. The loss of one bighorn is anticipated.

IMPACTS ON VEGETATIVE SALES

Under the *Proposed Action/Partial Wilderness* 630 acres of Mohave yucca would be protected from harvest.

Denial of harvest within the WSA would have a slight economic impact to the local industry that harvests this plant for fertilizer. This impact would be small as there are many harvestable yuccas available outside the WSA.

Conclusion: A total of 630 acres of Mohave yucca would be protected from harvest.

IMPACTS ON CULTURAL RESOURCES

This alternative would give the added protection of wilderness status. A rock shelter would be protected from the expansion of planned mining operations. Vehicles would not be allowed to drive up to pictograph and petroglyph sites.

Future excavations at the Bighorn Cave site would be restricted or made more difficult, but designation as wilderness would generally be beneficial for the cultural resources present.

Conclusion: Bighorn Cave, a rock shelter, and pictograph and petroglyph sites would be better protected. Future archaeological work at the Bighorn Cave might be more difficult.

AREA RECOMMENDED FOR USES OTHER THAN WILDERNESS

IMPACTS ON WILDERNESS VALUES

Wilderness values on the 1,980-acre portion of the WSA returned to other resource uses would not receive the legislative protection provided by wilderness designation. Over the long term, wilderness values would experience adverse impacts from motorized vehicle use, mineral development and coal slurry line maintenance.

Two mining operations would cause extensive and long-term surface disturbance that would impair the natural character of 600 acres. Visitors' perception of naturalness would be lost or impaired over an area of 1,650 acres, surrounding lands where visitors would be directly subject to the sight and sound of mining, construction, roads and traffic.

Solitude and primitive recreation opportunities would also deteriorate in the area because motorized traffic would continue. The sights and sounds of motorized recreation use on these areas would lessen the quality of solitude and primitive recreation opportunities over a larger area of 520 acres.

Periodic maintenance activities on the Black Mesa Pipeline coal slurry line would be pipe replacement, repair and monitoring. Additional impacts to the natural character of the area paralleling the pipeline would be minor sporadic impacts to visitors' perceptions of naturalness and solitude but would occur only during the actual periods of maintenance.

Conclusion: Adverse impacts to wilderness values would not be prevented on the portion of the WSA not designated wilderness. Motorized vehicle use and water catchment construction would impair wilderness values on the undesignated portion of the WSA.

IMPACTS ON MINERAL DEVELOPMENT

Under the *Proposed Action/Partial Wilderness* alternative there is no impact on mineral developments.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation use on 1,980 acres of WSA, although nonmotorized recreation use levels would increase by 100 VDY.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would increase on nonmotorized use from the present 100 VDY to 200 VDY.

IMPACTS ON WILDLIFE VALUES

Mineral development would destroy 600 acres (30.0% of nondesignated area or 2.0% of WSA) of crucial bighorn habitat, of peregrine falcon suitable habitat, and suitable desert tortoise and Gila monster habitat.

Mining and associated roads would negatively affect these species because increased contacts with humans often results in harassment, collection and direct killing. These species would be reduced or eliminated within one-quarter to one-half mile of the disturbed sites.

Conclusion: A total of 600 acres of crucial bighorn sheep, suitable peregrine falcon, and desert tortoise and Gila monster habitat would be destroyed by mineral development.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values of solitude and naturalness would be lost on 4,040 acres (13.8%) of the WSA by mineral development, motorized vehicle use, water catchment construction and range improvements.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of seven mines and associated activities would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values throughout the WSA would be impaired on 758 acres developed for minerals and road access, of which 600 acres are outside the designated area. Excavation of Bighorn Cave would impair the naturalness.

All Wilderness Alternative (Map 2-9)

The *All Wilderness* alternative would designate 29,190 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

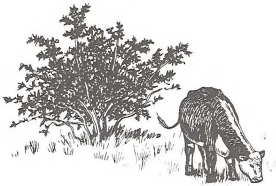
Wilderness designation of the entire Mount Nutt WSA would provide long-term legislative protection for its wilderness values. Wilderness values would benefit in certain areas because motorized vehicle use and the harvest of Mohave yucca would be excluded. However, under wilderness management, seven mines (on mining claims that had proven discoveries) would be developed within the wilderness in a manner affecting wilderness values.

Seven mines on public land are anticipated whether or not the area is designated wilderness. Mining and four miles of access road construction would result in long-term loss of naturalness on 958 acres. The sights and sounds of mining and traffic would be visible and audible from surrounding areas; thus, a visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired on 3,500 acres (12.0%).

Periodic maintenance activities on the Oatman water pipeline and the Black Mesa Coal Slurry pipeline would be pipe replacement, repair and monitoring. At the Oatman water pipeline, the natural character of the area would not be impaired. Impacts to visitors' perceptions of naturalness and solitude would result only during the actual periods of maintenance. In the area of the Black Mesa Coal Slurry pipeline, impacts to the natural character of the surrounding area would be minor and sporadic. Impacts to visitors' perceptions of naturalness and solitude would occur only during the actual periods of maintenance.

Four existing range improvement projects would be maintained and two additional range improvement projects would be constructed. One (3.5 miles of new fenceline) would disturb three acres. The other (1.8 miles of buried water pipeline) would be constructed from an existing project and would disturb two acres. Access to these developments would not require road construction. Visitors' perceptions of naturalness would be lost or impaired over a total area of 20 acres.

Bighorn Cave, an archeological site, would be excavated under minimum tool policy guidance. Disturbance to areas outside of the cave would be negligible. Visitors' perceptions of the wilderness qualities of naturalness and solitude would be temporarily disturbed in the area surrounding the cave, its access trail and temporary field camp during periods of excavation.



Eliminating all motorized recreation use on 29,190 acres of wilderness would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not see or hear motorized users on the 3,520 acres of the WSA presently subject to vehicle use. All washes, river bottoms and trails would be available for foot and horseback travel only.

Four existing wildlife water developments would be maintained and four additional wildlife water developments would be constructed. Each development would disturb one-quarter acre. Access to the sites would not require road construction. Natural character would thus be disturbed on a total of one acre. Design criteria would be such that no disturbance to visitors' perceptions of the wilderness qualities of naturalness or solitude would occur outside of this one-acre total disturbance.

Elimination of a projected 630 acres of Mohave yucca harvest areas would benefit the wilderness values of naturalness, solitude and primitive recreation. Wilderness visitors' perceptions of naturalness would not be lost over an area of 1,200 acres.

Opportunities for solitude and primitive recreation that would be preserved by wilderness designation include skill-testing cross-country treks, photography, sightseeing, hunting and camping.

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across 88 percent of the WSA by precluding motorized vehicle recreation and the harvest of Mohave yucca.

IMPACTS ON MINERALS DEVELOPMENT

All Wilderness designation would exclude all mining from those areas (lacking a valid discovery prior to the inclusion into the wilderness system), but would not stop three medium sized and two small open-pit mines and one medium sized underground mine developed on valid discoveries. Nor would it prevent mineral exploration and development on 4,161 acres of private mineral estate.

Conclusion: The *All Wilderness* designation would limit exploration and mining in the designated areas, but would not stop the development of three medium sized mines, two small open-pit mines and one medium sized underground mine on valid discoveries. Nor would it prevent mineral exploration and development on 4,161 acres of private mineral estate.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use by closing 29,190 acres to vehicle use, thus reducing motorized use from 1,200 VDY to zero. Nonmotorized recreation use would increase from 1,800 to 2,800 VDY.

Conclusion: The *All Wilderness* alternative would reduce total visitor use from 3,000 to 2,800 VDY, a loss of 1,200 motorized VDY and a gain of 1,000 nonmotorized VDY.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 28,232 acres of wildlife habitat from further surface-disturbing activities such as mineral exploration and ORV use. It would protect 22,202 acres (96.2% of WSA) of crucial bighorn habitat (including 8,000 acres of the 8,480 acre Mount Nutt lambing grounds), 25,162 acres (96.6% of the WSA) of suitable peregrine falcon habitat, and 28,232 acres (97.0% of WSA) of suitable habitat for the desert tortoise and Gila monster.

Mineral development and the associated increase in human activity would destroy 958 acres of desert bighorn, peregrine falcon and Gila monster habitat. The loss of three desert bighorn is anticipated. The four miles of new mining roads would affect six acres of wildlife habitat because of increased contacts with humans near the mining roads. This contact often results in harassment, collection and direct killing of these species when they reside within one-quarter to one-half mile of roadways.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because recreational travel would be restricted to foot travel. Therefore, human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *All Wilderness* alternative would after mineral development of 958 acres protect 28,232 acres of wildlife habitat. The alternative also protects 22,202 acres of bighorn habitat (96.2%) and 8,000 acres of lambing grounds, 25,162 acres of peregrine falcon habitat (96.6%), and 28,232 acres of desert tortoise and Gila monster habitat (97%) from further significant surface-disturbing activities.

IMPACTS ON VEGETATIVE SALES

Under the *All Wilderness* alternative 630 acres of Mohave yucca would be protected from harvest. Denial of harvest within the WSA would have a slight economic impact on the local industry that harvests this plant for fertilizer. This impact would be small as there are many harvestable sections available outside the WSA.

Conclusion: The economic impact of not harvesting 630 acres of Mohave yucca would be minor as suitable areas exist outside the WSA.

IMPACTS ON CULTURAL RESOURCES

Impacts under this alternative are the same as under the *Proposed Action/Partial Wilderness* since all of the known cultural resources were included in the partial area recommended for designation.

No other resources would be impacted by this alternative.

Thumb Butte — Mount Nutt WSA.

Enhanced Wilderness Alternative (Map 2-10

The *Enhanced Wilderness* alternative differs from the *Proposed Action/ Partial Wilderness* alternative in that 650 acres of land acquired, through exchanges, along the southern and northern boundaries of the WSA have been included in the 27,860 acres designated wilderness. A total of 1,980 acres would be returned to other resource uses.

AREA PROPOSED FOR WILDERNESS DESIGNATIONS

The impacts analyzed would be the same as those described under the *Proposed Action/Partial Wilderness* alternative except for the following.

AREA RECOMMENDED FOR USES OTHER THAN WILDERNESS

The *Enhanced Wilderness* alternative would not designate 1,980 acres as wilderness. Under the alternative, management actions, use and types and levels of impacts to wilderness qualities of naturalness, solitude, and primitive recreation, would be the same as those described under the *Proposed Action/ Partial Wilderness* alternative.

No other resources would be impacted by this alternative.

No Wilderness Alternative (Map 2-9)

The *No Wilderness* alternative would return 29,190 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Mount Nutt WSA's wilderness values would not receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in several areas would experience adverse impacts on naturalness and solitude from an increase of motorized VDY from 1,200 to 1,600 and an increase of acres mined from the Proposed Action's 1,008 to 1,409, and visual naturalness loss of 7,320 acres. Additionally, a 630 acre

harvest of Mohave yucca would affect visual qualities of naturalness over 1,200 acres.

Twelve mining exploration programs would result in nine mining operations and their associated five miles of road construction which would disturb the natural character of 1,409 acres. Visitors' perceptions of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over a larger area of 3,800 acres — surrounding lands where visitors be directly subject to the sights and sounds of mining, construction, roads and traffic.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by the mining development. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of development and much improved vehicular access are the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would experience a considerable decline around each of the seven mines—a result of road building and mining.

Bighorn Cave, an archeological site, would be excavated. Visitors' perceptions of naturalness and solitude would be disturbed over a 500-acre area surrounding the cave, its access trail and temporary field camp, but only during periods of excavation. Once the excavation is completed, the above named wilderness values would be restored to all but the immediate vicinity of the cave.

A projected 630 acres of Mohave yucca would be harvested along portions of the eastern boundaries of the WSA. Visitors' perceptions of naturalness would be impaired or lost over a larger area of 1,200 acres.

Because 29,190 acres would be open to vehicle use, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across 3,520 acres (12%) of the WSA. Improved mine road access on five miles of new road would permit vehicles to reach portions of the WSA infrequently visited by motor-dependent recreationists. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the back country experience.

Conclusion: The *No Wilderness* alternative would not protect the wilderness values of naturalness, solitude and primitive recreation opportunities on 9,020 acres (30.9 percent) of the WSA from mining developments, motorized vehicle use and harvesting of Mohave yucca.

IMPACTS ON MINERALS DEVELOPMENT

Under the *No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would increase motorized and nonmotorized use by 400 VDY each from the current use of 600 motorized and 250 nonmotorized.

Conclusion: Motorized and nonmotorized recreation visitor use will each increase by 400 VDY to 1,000 and 650, respectively.

IMPACTS ON WILDLIFE VALUES

Under the *No Wilderness* alternative, wildlife values would be impacted by increased mining on 1,407 acres and five miles of associated roads, disturbances surrounding the excavation of Bighorn Cave and the 400 VDY of motorized and nonmotorized recreation use.

Conclusion: Under the *No Wilderness* alternative mining activities not projected in the other alternative would affect an additional 401 acres of wildlife habitat, thus eliminating about one percent each of available bighorn sheep, peregrine falcon and desert tortoise habitat in the WSA. Unquantified wildlife losses would also occur from cultural excavation of Bighorn Cave and from increases of 400 VDY each in motorized and nonmotorized recreation pursuits.

Mine development would destroy 1,409 acres of crucial bighorn habitat, 960 acres of suitable peregrine habitat and 1,409 acres of suitable desert tortoise and Gila monster habitat.

IMPACTS ON VEGETATIVE SALES

Under the *No Wilderness* alternative 630 acres of Mohave yuccas (about 90) would be harvested. This alternative would benefit the industry.

Conclusion: The community could depend on a sustaining yield of Mohave yucca.

IMPACTS ON CULTURAL RESOURCES

The *No Wilderness* alternative would adversely affect rock shelters, pictographs and petroglyphs by allowing 1,500 VDY of vehicle travel and 300 acres of mining activities. Mining would directly impact an important rock shelter. Vehicles driving to the pictograph sites would increase the chances of vandalism to these sites. Positive impacts of excavations at the Bighorn Cave site would be allowed without the restrictions of wilderness designation.

Conclusion: The *No Wilderness* alternative would jeopardize cultural sites by increasing mining activity and increased motorized access. Both activities permit easier access to sites, thereby allowing more opportunity for destruction and vandalism of sites. Positive impacts will occur because motorized equipment

is permitted in and near cultural excavation sites, making the task less arduous.

No other resources would be impacted by this alternative.

WARM SPRINGS
(AZ-020-028/029) - 114,800 ACRES

Proposed Action/Partial Wilderness (Map 2-11)

The *Proposed Action/Partial Wilderness* alternative for the Warm Springs WSA would designate 90,600 acres as wilderness and 24,200 acres for other resource uses. This alternative differs from the *All Wilderness* alternative in that boundary adjustments would: 1) remove a large wedge-shaped parcel of land with lower wilderness values in the south-central portion of the WSA, 2) exclude a 5,500-acre area with high mineral potential (and one anticipated zeolite mine) in the McHeffy Butte area, 3) extend a 0.5-mile cherrystemmed jeep trail up to the Warm Springs site in order to facilitate burro capture and removal, 4) extend a 3.5 mile cherrystem road into the vicinity of both Alkali and Antelope Springs in order to facilitate burro capture and removal and to allow enhanced public vehicular access to hunting and hiking opportunities, and 5) delete an area in the east-central portion of the WSA to align the eastern boundary with the west side of a nine-mile segment of Sacramento Wash.

These actions will make the boundary much more definable and will delete a small area east of (and including) the wash that would be difficult to manage as wilderness because of vehicle use in this broad, sandy drainage. A total of three cherrystems will be deleted. These cherrystems access old mine exploration scars and receive little vehicle use. The other retained cherrystems and extensions of cherrystems included in the *Proposed Action* alternative provide access to spring sites (Caliche, Antelope and Alkali Springs). All three springs are very important to bighorn sheep and burro management.

Under this alternative, the following environmental consequences are anticipated.

AREA PROPOSED FOR WILDERNESS DESIGNATION

IMPACTS ON WILDERNESS VALUES

The *Proposed Action/Partial Wilderness* alternative would provide long-term legislative protection to wilderness values on 90,600 acres of the WSA. Wilderness values would benefit in certain areas because motorized vehicle use, the harvest of Mohave yucca and some mining activity would be excluded. Three mines on claims with valid existing rights and two mines on privately owned mineral estate would be developed within the wilderness in a manner affecting wilderness values; however this mining would occur whether or not the lands were designated.

Three mining operations on federal minerals would cause extensive and long-term surface disturbances that would impair the natural character of 155 acres. Visitors' perception of naturalness would also be lost or impaired over a larger area of 1,200 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic. These levels of impacts are somewhat different from what would occur if this area were not designated as wilderness. Under the *Proposed Action/Partial Wilderness* alternative, surface disturbance would be 1,447 acres less than under a *No Wilderness* alternative. There would, however, be no increase in the overall amount of surrounding acreage impaired by the sights and sounds of mining and access roads.

Several existing range improvement projects would be maintained and an existing reservoir and 3.5 miles of existing vehicle way would require occasional work with heavy equipment. Two additional projects would be developed. Six and one-half miles of fenceline would disturb six acres. An exclosure fence/burro trap would be constructed in the vicinity of an existing reservoir. These additions would disturb one acre. Visitors' perception of naturalness would be lost or impaired over a total area of 40 acres.

Nine existing wildlife water developments would be maintained and five additional developments would be built. Access to these sites would not require road construction, but one development would disturb one-quarter acre. Natural character would thus be disturbed on a total of one and one-quarter acres. Design criteria would be such that no disturbance of visitors' perception of the wilderness qualities of naturalness and primitive recreation would occur outside of this one and one-quarter acres of total disturbance.

Elimination of a projected 2,910 acres of *Yucca schidigera* harvest areas would benefit the wilderness values of naturalness, solitude and primitive recreation. Wilderness visitors would not encounter an area where most of the Yucca above three feet in height had been removed and the surface extensively disturbed because of cross-country use of trucks and other harvest equipment. Visitors' perception of naturalness would not be lost over an area of 4,000 acres.

Eliminating all motorized recreation use on 90,600 acres of wilderness would benefit the wilderness values of solitude and primitive recreation. Wilderness visitors would not see or hear vehicles on the 8,000 acres of the designated portion of the WSA presently open. All washes and trails would be available for foot and horseback travel only.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would maintain wilderness values on 98.7 percent of the designated portion of the WSA by preventing adverse impacts to naturalness, solitude, and primitive and unconfined recreation from motorized vehicle use, some mining activity and the harvest of Mohave yucca.

IMPACTS ON MINERALS DEVELOPMENT

Under *Proposed Action/Partial Wilderness*, 76,686 acres of federal mineral estate would be withdrawn from mineral entry, and 13,934 acres of private mineral estate would remain open. In spite of the wilderness designation, valid existing rights and private minerals would allow the development of three mines within the designated area.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would deny exploration projects on 76,686 acres of federal minerals, but allow the development of three mines within the designated area and leave 13,934 acres of private minerals open to development.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 90,600 acres by closing this acreage to motorized use and displacing 450 VDY of motorized recreation use to the undesignated portions of the WSA and to nearby public lands. Nonmotorized recreation activities that would benefit from these actions include day hiking, sightseeing, overnight backpacking, wildlife observation and photography. Nonmotorized recreation would increase from 250 VDY to 700 VDY.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 90,600 acres by displacing 450 VDY of motorized recreation use to nearby public lands.

IMPACTS ON WILDLIFE VALUES

The *Proposed Action/Partial Wilderness* alternative would protect 90,445 acres (99.0%) of wildlife habitat from further significant surface-disturbing activities such as mineral exploration and ORV use. It would protect 66,985 (98.7%) acres of crucial bighorn habitat (includes all but 475 acres of the 7,040 acre Columbine Springs lambing grounds); 5,120 acres (100%) of suitable peregrine falcon habitat and 90,445 acres (99.0%) of suitable habitat for the desert tortoise and Gila monster.

Mineral development and the subsequent increase in human activity would destroy 155 acres (0.2%) of bighorn crucial habitat and 155 acres (0.4%) of suitable desert tortoise and Gila monster habitat. Any of these species adjacent to roads and mines would be negatively affected because increased contacts with humans often results in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites. The loss of two desert bighorn is anticipated.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because recreational travel would be restricted to foot travel. Human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would protect 90,445 acres of wildlife habitat—66,985 acres of crucial bighorn habitat, 5,120 acres of suitable peregrine habitat and 89,745 acres of suitable desert tortoise and Gila monster habitat.

Mineral development would impair 155 acres of crucial bighorn habitat and 155 acres of suitable desert tortoise and Gila monster habitat. The loss of two bighorn is expected.

IMPACTS ON VEGETATIVE SALES

Under the *Proposed Action/Partial Wilderness* alternative 2,910 acres of Mohave yucca would be protected from harvest. Denial of harvest within the WSA would have a slight economic impact on the local industry that harvests this plant for fertilizer. This impact would be small as there are many harvestable sections available outside the WSA.

Conclusion: A total of 2,910 acres of Mohave yucca would be protected from harvest.

IMPACTS ON CULTURAL RESOURCES

This alternative would provide the additional protection of wilderness status. Vehicle travel, future mining activity and new road construction would be prohibited or limited. Petroglyphs on small boulders would be less likely removed and/or vandalized. Temporary camp sites would receive protection from surface disturbance by ORVs and some mining through wilderness designation. None of the planned BLM resource actions, except possibly the increased visitor use, would directly impact the cultural resources.

Conclusion: Petroglyphs and temporary camp sites would be better protected.

AREA RECOMMENDED FOR USES OTHER THAN WILDERNESS

IMPACTS ON WILDERNESS VALUES

Wilderness values on the 24,200-acre portion of the WSA returned to other resource uses would not receive the legislative protection provided by wilderness designation. Over the long term, wilderness values would experience adverse impacts from motorized vehicle use.

Solitude and primitive recreation opportunities would also deteriorate in the area because of motorized traffic and mining development on 600 acres. The sights and sounds of motorized recreation use on these areas would lessen the quality of solitude and primitive recreation opportunities over an area of 6,000 acres.

Conclusion: Adverse impacts to wilderness values would not be prevented on the portion of the WSA not designated wilderness. Consequently, motorized vehicle use would impair wilderness values on 24.8 percent of the undesignated portion of the WSA.

IMPACTS ON MINERAL DEVELOPMENT

Under the *Proposed Action/Partial Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *Proposed Action/Partial Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation use on 24,200 acres of the WSA, although motorized recreation use levels would increase because of displacement from the wilderness portion of the area.

Conclusion: The *Proposed Action/Partial Wilderness* alternative would not change opportunities for recreation use on 24,200 acres of WSA.

IMPACTS ON WILDLIFE VALUES

In this area, 24,200 acres of wildlife habitat would be returned to other multiple uses under MFP decisions. This area would receive some protection from road construction, ORV use, mine development and mine exploration. However, these activities would degrade habitats of desert bighorn, desert tortoise and the Gila monster by increasing human activity and disturbance to wildlife—often resulting in harassment, collection and direct killing. While quantification is not possible, this disturbance would decrease numbers and ranges of desert bighorn (8,960 acres of crucial habitat), and the desert tortoise and Gila monster (18,500 acres of suitable habitat).

ORV use would increase with the same effects on wildlife as discussed above.

Conclusion: In this area 24,200 acres of wildlife habitat, including 8,960 acres of crucial bighorn habitat and 18,500 acres of suitable desert tortoise and Gila monster habitat, would be returned to multiple use management under the MFP decisions. These habitats would degrade because of increased surface-disturbing activities such as ORV use, road construction and mine exploration and development.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values on portions of the WSA would be disturbed by mineral development, motorized vehicle use, wildlife water catchment construction and grazing developments.

A total of 847 acres of potential mineral developments would be denied.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The development of four mines would disturb the naturalness of the area in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined would be used up and lost to future use. Wilderness values would be impaired on 755 acres developed for minerals and road access.

All Wilderness Alternative (Map 2-12)

The *All Wilderness* alternative would designate 114,800 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Warm Springs WSA would provide long-term legislative protection for its wilderness values. These values would benefit in certain areas because some anticipated mining activity, motorized vehicle use and harvest of Mohave yucca would be excluded. Four mining operations on mining claims with valid existing rights and proven discoveries, and one mine on private mineral estate would be developed within the wilderness in a manner affecting wilderness values.

Five mining operations would cause extensive and long-term surface disturbances that would impair the natural character of 707 acres. Visitors' perception of naturalness would also be lost or impaired over a larger area of 5,200 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction, roads and traffic.

Several existing range improvement projects would be maintained. Maintenance of an existing reservoir and 3.5 miles of existing vehicle way would require occasional work with heavy equipment. Two additional projects would be developed. Six and one-half miles of fenceline would disturb six acres. An exclosure fence/burro trap would be built in the vicinity of an existing reservoir. These additions would disturb one acre. Visitors'

perception of naturalness would be lost or impaired over a total area of 40 acres.

Nine existing wildlife water developments would be maintained and five additional wildlife water developments would be constructed. Access to these sites would not require road construction. Each new development would disturb one-quarter acre. Natural character would thus be disturbed on a total of one and one-quarter acres. Design criteria would be such that no disturbance to visitors' perception of the wilderness qualities of naturalness and primitive recreation would occur outside of this one and one-quarter acres of total disturbance.

Elimination of a projected 2,910 acres of Mohave Yucca harvest areas would benefit the wilderness values of naturalness, solitude and primitive recreation. Wilderness visitors would not encounter an area where most of the yucca above three feet in height have been removed and the surface extensively disturbed due to cross-country use of trucks and other harvest equipment. Visitors' perception of naturalness would not be lost over an area of 4,000 acres.

Eliminating all motorized recreation use on 114,800 acres would benefit the wilderness values of solitude and primitive recreation on the 14,000 acres now used by ORVs. Wilderness visitors would not see or hear motorized users in the 9.6 percent of the WSA presently affected by motorized use.

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across 95.4 percent of the WSA by precluding motorized vehicle recreation, some mining activity and the harvest of Mohave yucca.

IMPACTS ON MINERALS DEVELOPMENT

The *All Wilderness* designation would exclude all future exploration and mining from 98,586 acres of federal mineral estate, but would not stop development of one large and two small open-pit mines and one large and one small underground mine on valid discoveries or private minerals within the wilderness area. The 16,214 acres of private mineral estate would remain open.

Conclusion: The *All Wilderness* designation would deny the exploration projects, but would allow the development of three

Burros in water trap at Warm Springs — Warm Springs WSA.

open-pit mines and two underground mines, disturbing approximately 707 acres. The 16,214 acres of private mineral estate would remain open for mineral exploration and development.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use by closing 114,800 acres to vehicle use, thus displacing 600 VDY of motorized use. Nonmotorized recreation activities (day hiking, backpacking, wildlife observation and photography) on 114,800 acres within the area would increase from 250 VDY to 700 VDY.

Conclusion: The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation on 114,800 acres, and displace 600 VDY of motorized use.

IMPACTS ON WILDLIFE VALUES

The *All Wilderness* alternative would protect 114,093 acres (99.4% of WSA) of wildlife habitat from further significant surface-disturbing activities, such as mineral exploration and ORV use. It would protect 76,093 acres (99.1%) of crucial bighorn habitat, (includes all of the 7,040 acre Columbine Springs lambing grounds) 5,120 acres (100%) of suitable peregrine falcon habitat and 114,093 acres (99.4%) of suitable habitat for the desert tortoise and Gila monster.

Mineral development and the subsequent increase in human activity would destroy 707 acres (0.9%) of bighorn crucial habitat and 707 acres (0.6%) of suitable desert tortoise and Gila monster habitat. Any of these species adjacent to roads and mines would be negatively affected because of increased contacts with humans—often resulting in harassment, collection and direct killing. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites. The loss of two desert bighorn is anticipated.

Although there would be an increase in visitor use days, recreational impacts to wildlife are expected to decrease because recreational travel would be restricted to foot travel. Human contacts resulting in disturbances to wildlife would be minimal.

Conclusion: The *All Wilderness* alternative would protect 114,093 acres of wildlife habitat—76,093 acres of crucial bighorn habitat (including all of the 7,040 acre lambing grounds); 5,120 acres of suitable peregrine habitat and 114,093 acres of suitable desert tortoise and Gila monster habitat—from further significant surface-disturbing activities.

Mineral development would impair 707 acres of crucial bighorn habitat and 707 acres of desert tortoise and Gila monster habitat. The loss of two bighorn is anticipated.

IMPACTS ON VEGETATIVE SALES

Under the *All Wilderness* alternative 2,910 acres of Mohave yucca would be protected from harvest. Denial of harvest within the WSA would have a slight economic impact on the local industry that harvests this plant for fertilizer. This impact would be small as there are many harvestable lands available outside the WSA.

Conclusion: A total of 2,910 acres of Mohave yucca would be protected from harvest.

IMPACTS ON CULTURAL RESOURCES

This alternative is the same as *Proposed Action/Partial Wilderness* since all of the known cultural resources were included in the partial area recommended for designation.

No other resources would be impacted by this alternative.

Enhanced Wilderness Alternative (Map 2-13)

The *Enhanced Wilderness* alternative differs from the *Proposed Action/Partial Wilderness* alternative in that 620 acres acquired through exchange in the northeastern portion of the WSA has been included in the 91,220 acres designated wilderness. The 24,200 acres would be returned to other resource uses. The impacts analyzed would be the same as described under the *Proposed Action/Partial Wilderness* alternative.

AREA RECOMMENDED FOR USES OTHER THAN WILDERNESS

The *Enhanced Wilderness* alternative would not designate 24,200 acres as wilderness. Under this alternative, management actions, use, and types and levels of impacts to the wilderness qualities of naturalness, solitude, and primitive recreation, and to other resource uses would be the same as described under the *Proposed Action/Partial Wilderness* alternative.

No Wilderness Alternative (Map 2-12)

The *No Wilderness* alternative would return 114,800 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Warm Springs WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience adverse impacts from motorized vehicle use.

eleven mining exploration programs, anticipated mining ventures, construction of two range improvement projects, construction of five wildlife water developments and the harvest of Mohave yucca.

Eleven mining exploration programs and the resulting eight mining operations would impair the natural character of 1,602 acres. Visitors' perception of naturalness and the quality of their solitude opportunities would be essentially lost or impaired over a larger area of 7,700 acres—surrounding lands where visitors would be directly subject to the sights and sounds of mining, construction and traffic.

The existing quality and array of primitive recreation opportunities would decline on WSA areas adversely affected by the mining development. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of development and much improved vehicular access would be the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would decline around each of the eight mines as a result of road building and mining.

Several existing range improvement projects would be maintained. Maintenance of an existing reservoir and 3.5 miles of existing vehicle way would require occasional work with heavy equipment. Two additional projects would be developed. Six and one-half miles of fenceline would disturb six acres. An exclosure fence/burro trap built near an existing reservoir would disturb one acre. Visitors' perception of naturalness would be lost or impaired over a total area of 40 acres.

Nine existing wildlife water developments would be maintained and five additional wildlife water developments would be constructed. Access to these sites would not require road construction. Each new development would disturb one-quarter acre so the natural character would thus be disturbed on a total of one and one-quarter acres. Design criteria would be such that no disturbance to visitors' perception of the wilderness qualities of naturalness and primitive recreation would occur outside of this one and one-quarter acres of total disturbance.

A projected 2,910 acres of Mohave yucca would be harvested along portions of the eastern boundaries of the WSA. Visitors' perceptions of naturalness would be impaired or lost over a larger area of 4,000 acres.

Because 114,800 acres would be open to vehicle use, the sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities across 14,000 acres of the WSA. Nonmotorized recreationists would be likely to encounter vehicles, thus reducing the quality of the backcountry experience.

Conclusion: The *No Wilderness* alternative would not prevent adverse impacts to wilderness values. As a result, motorized vehicle use, mining, range improvement projects and Mohave yucca harvest would cause a loss or impairment of the wilderness values of naturalness, solitude and primitive recreation opportunities on 22.4 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

The *No Wilderness* alternative would not change existing opportunities for motorized and nonmotorized recreation activities in the Warm Springs WSA.

Conclusion: Opportunities for recreation use would remain unchanged under the *No Wilderness* alternative.

IMPACTS ON WILDLIFE VALUES

Under the *No Wilderness* alternative 114,800 acres would be returned to other multiple uses under MFP decisions. This area would receive some protection from road construction, ORV use, mine development and mine exploration. However, these activities would degrade habitats of desert bighorn, peregrine falcon, desert tortoise, Gila monster and Goldroad Forticellia by increasing human activity and disturbance to wildlife—often resulting in harassment, collection and direct killing. While quantification is not possible, this disturbance would decrease numbers and ranges of desert bighorn (76,800 acres of crucial habitat including 7,040 acres of the Columbine Springs lambing grounds), peregrine falcon (5,120 acres of suitable habitat), and the desert tortoise and Gila monster (114,800 acres of suitable habitat). The acreage of suitable habitat for the Goldroad Forticellia is unknown.

ORV use would increase and motorized vehicles would have the same effects on wildlife as discussed above.

Mine development and the subsequent increase in human activity would destroy 1,602 acres (2.0%) of crucial bighorn habitat and 1,602 acres (1.3%) of suitable desert tortoise and Gila monster habitat. These species are expected to be reduced or eliminated within one-quarter to one-half mile of disturbed sites. The loss of two desert bighorn is anticipated.

Conclusion: Under the *No Wilderness* alternative 76,800 acres of crucial bighorn habitat (includes 7,040 acres of lambing grounds), 5,120 acres of suitable peregrine falcon habitat, and 114,800 acres of suitable desert tortoise and Gila monster habitat would be returned to other multiple uses under the MFP decisions. These habitats would be degraded because of increased surface-disturbing activities, such as ORV use, and mine exploration and development.

Mine development would destroy 1,602 acres of crucial bighorn habitat and 1,602 acres of suitable desert tortoise and

Gila monster habitat. The loss of two desert bighorn is anticipated.

IMPACTS ON VEGETATIVE SALES

Under the *No Wilderness* alternative 2,910 acres of Mohave yucca would not be protected from harvest. This would remove an estimated 90 percent of the seed producing Mohave yuccas in the harvest area. Under this alternative the industry's planned harvest would be unaffected.

Conclusion: A total of 2,910 acres of Mohave yucca would be harvested.

IMPACTS ON CULTURAL RESOURCES

This alternative would not provide additional protection for the temporary camp sites and petroglyphs. Vehicle travel, future mining activity and new road construction would increase negative impacts to these sites. Some of the petroglyphs are on very small boulders which could be easily loaded into a vehicle.

Conclusion: Petroglyphs and temporary camp sites would not be protected.

No other resources would be impacted under this alternative.

SOUTH BRADSHAWS EAST WSA
(AZ-020-84A) - 640 ACRES

Proposed Action/No Wilderness (Map 2-6)

Under the *Proposed Action/No Wilderness* the South Bradshaws WSA's 640 acres would be returned to other resource uses.

Under this alternative, the following environmental consequences are anticipated.

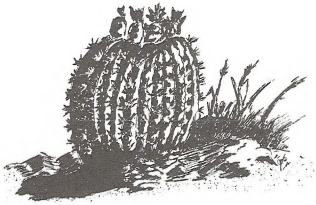
IMPACTS ON WILDERNESS VALUES

Wilderness values under this alternative would not receive protection provided by designation. In the long term, wilderness values would be degraded by the anticipated mining activity and road construction. The exploration, mining activities and one-half mile of road construction would impair the natural character and vegetation of six acres. However, the entire area would be affected since the anticipated mining location is visible from the entire WSA. A visitor's perception of naturalness and the quality of solitude opportunities would be lost or impaired over the entire 640 acres. Currently, the area may be reached by unmaintained 4 WD trails and a one-half mile walk to the boundary.

Long-term visual impacts to naturalness would continue even after mining and mine site reclamation were completed. Since the unit is dominated by steep, rugged slopes with shallow soils and low rainfall, the rehabilitative processes would be very slow at best. Road construction would create long-term visual impacts to the area.

The existing quality of primitive recreation opportunities would decline over the entire WSA. The entire unit would be subject to the sights and sounds of mineral development and improved vehicular access. Hiking and sightseeing opportunities would decline in the WSA as a result of road construction and mineral development. Improved mine access would allow vehicles to enter portions of the WSA never visited by motorized recreationists.

Conclusion: The impairment of naturalness, solitude and primitive recreation and the impact from the anticipated mineral development would deteriorate wilderness values over the entire 640 acres of the WSA.



IMPACTS ON MINERAL DEVELOPMENT

Under the *Proposed Action/No Wilderness* alternative there is no impact on mineral development.

Conclusion: This *Proposed Action/No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USES

This alternative would allow motorized recreation to expand into the WSA on a new access road to the anticipated mining activity. The expected access development would slightly increase motorized recreation in the unit, while slightly decreasing the nonmotorized recreation use.

Conclusion: Under this alternative overall recreation use would remain at 100 visitor days/year. The types and patterns of recreation use (motorized vs. nonmotorized) would shift as access to the mineral activity is developed.

IMPACTS ON WILDLIFE VALUES

This alternative would allow mineral exploration and development, resulting in the loss of approximately one percent (six acres) of the unit's chaparral habitat. This would not be significant since the area does not support large numbers of wildlife. In addition, adjacent chaparral habitat outside the WSA contains higher quality habitat. The unit's loss of 10 acres would not significantly affect the potential for the state-listed Gilbert's skink to exist. Other forms of wildlife (mule deer, coyote, bobcat) would migrate temporarily out of the area proposed for mineral development and into adjacent areas.

Conclusion: This alternative would allow mineral development to reduce the area's chaparral habitat by two percent or 10 acres but would not significantly impact wildlife in the long term.

IMPACTS ON CULTURAL VALUES

One potential *National Register* quality site would be in danger of damage caused by mining activity, road construction and ORV use. The increased vehicle access and mining activity would threaten cultural resources with erosion and vandalism.

Conclusion: Vandalism and erosion would endanger one potential *National Register* site because of increased mining activity and motorized access.

No other resource would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

The naturalness of the entire area would be disturbed by mining and increased motorized recreation use.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Mining and associated activities would impair the area's naturalness in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined in the one new mine would be used up and lost to future uses. Wilderness values of naturalness and opportunities for solitude and primitive recreation would be impaired on the 640 acres.

All Wilderness (Map 2-6)

All 640 acres of the South Bradshaws WSA would be designated as wilderness.

Under this alternative, the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of this unit would provide long-term legislative protection for its wilderness values. Precluding mineral exploration and development and road construction would maintain the WSA's existing wilderness values on 640 acres. The area's naturalness, quality of solitude and primitive recreation opportunities would be preserved. Wilderness visitors would not hear or see motorized users in the southwestern portion of the WSA. The perception of naturalness and the scenic character of the unit would be preserved and maintained. In addition, the WSA's wilderness values have been greatly enhanced by the Castle Creek Wilderness Area which forms the northern boundary of the WSA in the Prescott National Forest.

Conclusion: Designation of the South Bradshaws WSA would preserve wilderness values over the entire WSA by precluding mineral development. The unit's opportunities for solitude and primitive recreation, as well as the scenic character of the area, would be enhanced by the adjacent Castle Creek Wilderness Area in the Prescott National Forest.

IMPACTS ON MINERAL DEVELOPMENT

Under the *All Wilderness* alternative 640 acres of federal mineral estate would be withdrawn from mineral entry under the mining laws. The entire WSA is considered to have moderate mineral potential. Wilderness designation would preclude an exploration program and the development of one small mine in the southwest portion of the unit.

Conclusion: The *All Wilderness* alternative would preclude one exploration program and the development of one small mine.

IMPACTS ON RECREATION USES

This alternative would ensure that the southwest portion of the WSA would not be available for mineral development. The unit would continue to be protected from the impacts of road construction and the resulting motorized access to the WSA. Nonmotorized recreation use is expected to increase by 50 percent to 150 visitor days/year. The projected increase is the result of the increased awareness of the WSA and its proximity to the Castle Creek Wilderness Area in the Prescott National Forest.

Conclusion: Wilderness designation under this alternative would increase nonmotorized recreation use by 50 percent to 150 visitor days/year as a result of increased wilderness awareness.

IMPACTS ON WILDLIFE VALUES

This alternative would prevent mining-related disturbance on two percent (10 acres) of the chaparral habitat within the WSA. Thus habitat would be protected for the state-listed Gilbert's skink as well as for mule deer, coyote and other existing wildlife species.

Conclusion: Designation would prevent the loss of 10 acres of chaparral habitat.

IMPACTS ON CULTURAL VALUES

The elimination of motorized access, mining activity and road construction would benefit one potential *National Register* quality site in this WSA. These restrictions would reduce the potential for vandalism and erosion.

Conclusion: One potential *National Register* quality site would benefit by the elimination of motorized access and the resulting vandalism and erosion.

No other resources would be impacted by this alternative.

SIERRA ESTRELLA
(AZ-020-160) - 14,830 ACRES

Proposed Action/All Wilderness (Map 2-14)

The *Proposed Action/All Wilderness* for the Sierra Estrella WSA would designate 14,830 acres as wilderness.

Under this alternative, the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

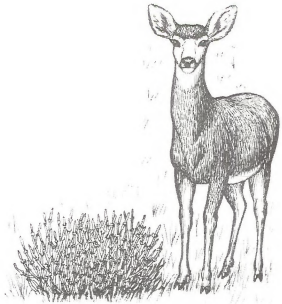
Wilderness designation of the entire Sierra Estrella WSA would provide long-term legislative protection to its wilderness values by limiting or prohibiting land uses not compatible with wilderness preservation. Wilderness values would benefit in certain areas because anticipated road and right-of-way construction, motorized vehicle use and most mining would be excluded.

Eliminating all motorized recreation use would benefit the wilderness value of solitude. Wilderness visitors would not see or hear motorized users in the 25 percent of the WSA presently affected by such use.

Wilderness designation would maintain the existing caliber and array of primitive recreation opportunities, including hiking, camping, backpacking and animal sightseeing. The scenic features and largely natural setting preserved by wilderness would continue to provide an area for increasing numbers of primitive recreationists.

One small sized mine (T. 3 S., R. 1 E., section 24) would be developed within the WSA in a manner affecting wilderness values, whether or not the area is designated wilderness. About five acres of surface disturbance would result from mining and a long-term loss of naturalness is likely on affected lands. The sights and sounds of mining and traffic would be noticeable from surrounding areas; thus, a visitor's perception of naturalness and the quality of solitude and primitive recreation opportunities would be lost or impaired on 700 acres. Reclamation of disturbed areas by machine and nature would lessen their noticeability to visitors.

Conclusion: Wilderness designation would maintain the existing wilderness values of naturalness, solitude and primitive recreation on 96 percent of the WSA by precluding much potential new mining and right-of-way development. Potential mining on claims with proven discoveries would impair wilderness values on four percent of the WSA, but would not influence wilderness values elsewhere.



IMPACTS ON MINERAL RESOURCES

This alternative would withdraw 14,830 acres of federal mineral estate from mineral entry under the mining laws (subject to valid existing rights), including 3,210 acres of high potential and 4,030 acres of moderate mineral potential. Wilderness designation would eliminate 15 exploratory and four small mine operations. One small mine operation would be developed.

Conclusion: This alternative would deny 15 exploratory and four small mine operations, but one small mine operation would be allowed.

IMPACTS ON RECREATION USES

Designation would close the entire 14,830 acres, including 2.5 miles of vehicle ways to ORV use. Hiking, hunting and rock collecting would continue. Current recreation uses amount to about 1,200 motorized and 700 nonmotorized visitor days/year.

Because Sierra Estrella WSA is near a major urban area, nonmotorized use would increase to 1,000 VDY. Most of the vehicle-based users displaced as a result of wilderness designation would find comparable terrain and recreational opportunities on nearby public land. Projected changes in visitor use levels under designation would not impair public lands within the WSA or nearby.

Conclusion: Designation under this alternative would change the types of recreation use taking place in the WSA from a mix of motorized and nonmotorized recreation to all nonmotorized recreation.

IMPACTS ON WILDLIFE VALUES

Under the *Proposed Action*, degradation of 180 acres of desert tortoise habitat and an accompanying loss of seven adults would be avoided. Degradation of 130 acres of bighorn sheep habitat and an accompanying loss of one adult sheep would be avoided. Unquantifiable losses of other species (golden eagle, prairie falcon, Cooper's hawk, mule deer, javelina, mountain lion) would be avoided as well.

Conclusion: This alternative would prevent the degradation of 1.4 percent of the desert tortoise habitat and the loss of seven adults and also prevent the degradation of 1.3 percent of bighorn sheep habitat and the loss of one adult sheep.

IMPACTS ON CULTURAL RESOURCES

Under wilderness designation mineral development, road construction and upgrading of vehicle access would be restricted or prohibited. The elimination of vehicle-based visitation would reduce the potential for vandalism to this site. Therefore, the one *National Register* quality site in this WSA would benefit under wilderness designation.

Conclusion: Designation would reduce the potential for vandalism to a *National Register* quality site because of the elimination of vehicle-based visitation and the restrictions on mining activities, road upgrade and road construction.

IMPACTS ON LAND USES

No lands actions would be allowed in the WSA; therefore, the existing temporary communication site would be removed and no further development allowed.

Conclusion: This alternative would not allow new communication sites to be developed and the existing site would be removed.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

A total of eight and one-half acres of crucial wildlife habitat and the naturalness of the area would be disturbed by mining.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Mining and associated activities would impair the area's naturalness in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined in the one new mine would be used up and lost to future uses. Wilderness values of naturalness and opportunities for solitudes and primitive recreation would be impaired on 8.5 acres developed for minerals.

No Wilderness (Map 2-14)

The *No Wilderness* alternative for the Sierra Estrella WSA would designate none of the 14,830 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Sierra Estrella WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience adverse impacts caused by anticipated mining, road and rights-of-way construction and motorized vehicle use.

The sights and sounds of motorized recreation use would lessen the quality of solitude and primitive recreation opportunities on 4,300 acres of the WSA. Vehicles would travel improved roads, particularly within the WSA's southwestern portion. Visitor encounters with vehicles would be mostly on lands adversely influenced by mining and rights-of-way.

Conclusion: Surface disturbances associated with mining and rights-of-way construction in the WSA's southwestern quarter and western area would result in direct or cumulative loss or impairment of wilderness values of naturalness, primitive recreation and solitude on 29.0 percent of the WSA. Wilderness values

in the rugged interior hills (71.0 percent of the WSA) would remain unaffected by nondesignation because no development is anticipated.

IMPACTS ON MINERAL RESOURCES

Under the *No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

Under this alternative, the Sierra Estrella WSA would remain open to recreational uses (hunting, hiking and rock collecting). ORV use would be confined to the existing 2.5 miles of vehicle ways and trails.

An increase from 1,200 to 1,500 motorized and from 300 to 500 nonmotorized VDY is projected within the next 25 years.

Conclusion: The *No Wilderness* alternative would allow motorized use to increase by 25 percent and nonmotorized to increase by 67 percent.

IMPACTS ON WILDLIFE VALUES

Under the *No Wilderness* alternative 250 acres of desert tortoise habitat would be degraded and eight adult tortoise would be lost: also, 200 acres of desert bighorn habitat would be degraded and desert bighorn population would be reduced to 14 individuals with a loss of one adult sheep.

Unquantified loss of other species also would result — these declines would be greater than under the proposed action. The losses would be by from increased mining activities and visitor use.

Conclusion: The *No Wilderness* alternative would allow mining and increased visitor use to degrade desert tortoise and bighorn sheep habitat, causing the loss of eight adult tortoise and one adult sheep.

IMPACTS ON CULTURAL RESOURCES

Visitor use would increase because of improved access and ORV use and the one known *National Register* quality site would be threatened by increased potential for vandalism.

Conclusion: Nondesignation would result in an increased potential for vandalism on the one known *National Register* quality site because of the higher vehicle-based visitation rate.

IMPACTS ON LAND USES

Lands actions would be allowed in the area, including the development of communication sites on Butterfly Peak. The existing temporary site would be allowed to remain and six to ten communication sites would be developed.

Conclusion: The existing temporary communication site would remain and six to ten anticipated communication sites would be developed.

No other resources would be impacted by this alternative.

RAGGED TOP WSA
(AZ-020-197) - 4,460 ACRES

Proposed Action/No Wilderness (Map 2-15)

Under the *Proposed Action/No Wilderness*, the Ragged Top WSA's 4,460 acres would be returned to other resource uses.

Under this alternative, the following environmental consequences are anticipated.

IMPACTS TO WILDERNESS VALUES

None of the Ragged Top WSA's wilderness values would receive legislative protection provided by wilderness designation. Over the long term, wilderness values in certain areas would experience degradation from the anticipated mineral development, related road construction and increased motorized vehicle use.

The mineral development and associated road construction would impair the natural character of 17 acres in the southwestern portion of the WSA. A visitor's perception of naturalness and the quality of solitude opportunities would be adversely affected further over a larger area of 750 acres (16.8 percent of the WSA)—surrounding lands where visitors would be directly subjected to the sights and sounds of mining, road construction and increased motorized traffic.

The unit's quality and array of primitive recreation opportunities would decline significantly in areas adversely affected by mineral development. The loss of naturalness and scenic features in the southwest portion of the WSA from mineral development would further degrade wilderness experience opportunities in that portion of the unit. Improved and new mining access roads would permit vehicles to traverse portions of the WSA where no roads currently exist. The northern and eastern portions of the unit (3,000 acres) would not be subject to sights and sounds of the anticipated mineral development. Nonmotorized recreationists would be likely to encounter vehicles throughout the entire WSA on ways and vehicle trails, thus reducing the quality of the backcountry experience.

Conclusion: The anticipated mining activity and increased motorized vehicle use would result in the further deterioration of wilderness values over 16.8 percent of the WSA. The remainder of the unit would not be greatly affected by the mineral development. This area would be subject to increased motorized recreation resulting in a decrease in wilderness experience opportunities.

IMPACTS ON MINERAL DEVELOPMENT

Under this alternative, there is no impact on mineral development.

Conclusion: This alternative does not impact mineral development.

IMPACTS ON RECREATION USES

Nondesignation of the WSA would decrease nonmotorized recreation by 200 VDY due to an increase of 550 VDY of motorized recreation on 4.5 miles of vehicle ways and existing trails. Visitor use would continue to increase to 1,750 VDY from the current level of 1,400 VDY as a result of population growth in the nearby communities and the city of Tucson.

Conclusion: Visitor use days/year would increase to approximately 1,750 from the current level of 1,400 VDY as a result of increased motorized recreation in the area. Increases in population from nearby communities will favor motorized recreation, thereby increasing motorized VDY from 700 to 1250 and decreasing nonmotorized from 700 to 500.

IMPACTS ON WILDLIFE VALUES

Nondesignation of this WSA would result in the loss of about 14 acres of bighorn sheep and desert tortoise habitat. The surface disturbance associated with mining and ORVs would reduce the amount of habitat available to the three state-listed species that live in the unit (bighorn sheep, desert tortoise and Gila monster). Bighorn sheep use the area of the proposed mineral development as a corridor between Ragged Top and Silver Bell Peak.

Mineral development and increased human activity in the southwest portion of the WSA would cause bighorn sheep to avoid 600 acres of crucial bighorn sheep habitat. This would result in adverse impacts to migration patterns of bighorn sheep herds of both Ragged Top and Silver Bell. Degradation of 14 acres of important desert tortoise and Gila monster habitat adjacent to the mining activity and road construction would result in the loss of three adult tortoise.

Conclusion: Under the *No Wilderness* alternative 600 acres (16%) of crucial bighorn sheep habitat would be avoided due to mining activities; 14 acres of mining-related surface disturbance would cause degradation of bighorn sheep, desert tortoise and Gila monster habitat.

IMPACTS ON CULTURAL VALUES

It is probable that a *National Register* quality site exists within the WSA. Impacts caused by the 14 acres of mining activity disturbance are not likely to threaten this potential site. Vandalism and erosion, resulting from increased motorized visitation would be the primary forms of impact.

Conclusion: Under nondesignation, the potential for vandalism and erosion to occur to a *National Register* quality site would increase as a result of the increase in vehicle based visitation.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

A total of 600 acres of crucial wildlife habitat and the naturalness of the area would be disturbed by mining and increased motorized recreation use.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Mining and associated activities would impair 14 acres of the area's naturalness in the long term.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The minerals mined in the two new mines would be used up and lost to future uses. Wilderness values of naturalness and opportunities for solitude and primitive recreation would be impaired on 14 acres developed for minerals.

All Wilderness (Map 2-15)

The *All Wilderness* alternative for the Ragged Top WSA would designate 4,460 acres as wilderness.

Under this alternative, the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of this WSA would provide long-term legislative protection for its wilderness values. Precluding the anticipated mineral exploration, development and road construction would maintain the WSA's existing wilderness values in the southwest portion of the WSA.

By not allowing the development of two small mines and two exploration programs, the naturalness of 17 acres would be maintained. In addition, the perception of naturalness would be preserved and the quality of solitude and primitive recreation opportunities sustained on 750 acres (17 percent) within the WSA. Eliminating motorized recreation also would benefit the naturalness and opportunities for solitude in the unit.

Wilderness visitors, however, would continue to hear motorized users on all four sides of the unit because of the popularity of the area, the existing cherrystemned roads and surrounding man-made imprints. Designation of the entire WSA would prevent the further degradation of the WSA's special features now being studied for their botanical and geological values.

Conclusion: Wilderness designation would maintain the naturalness and opportunities for solitude and primitive recreation for about 750 acres in the southwestern portion of the WSA by precluding mineral development and road construction.

IMPACTS ON MINERAL DEVELOPMENT

This alternative would withdraw 4,460 acres — all of which has a moderate potential for minerals — of federal mineral estate from mineral entry under the mining laws. Wilderness designation would preclude two exploration programs and the development of two small mines.

Conclusion: This alternative would deny two exploration programs and two small mines.

IMPACTS ON RECREATION USES

Wilderness designation would prohibit motorized recreation use (ORVs) on 4,460 acres within the WSA decreasing motorized VDY from 700 to 0. Visitor use would increase by 350 VDY to 1,750 VDY as the WSA's popularity increases. Ecological studies and nonmotorized recreation would benefit from implementing this alternative. Most of the displaced motorized vehicle users would find comparable terrain and opportunities on nearby public lands.

Conclusion: Designation under the *All Wilderness* alternative would change the types of recreation use in the WSA from a mix of motorized and nonmotorized recreation to all nonmotorized. The projected visitor use is expected to increase by 1,050 visitor use days/year, primarily due to increased popularity of the area.

IMPACTS ON WILDLIFE VALUES

This alternative would protect 3,780 acres of crucial bighorn sheep, and 4,460 acres of desert tortoise and Gila monster habitat from any new surface disturbance associated with mining and road construction and upgrading. The migration corridor between Ragged Top and Silver Bell Peak for the bighorn sheep would not be degraded or disturbed by mining-related activities. However, migration patterns of the bighorn sheep may be disrupted by the 1,750 visitor use days to the area. Desert tortoise and Gila monster in the WSA would significantly benefit from this alternative because of prohibitions against motorized recreation use in the entire unit and mineral development in the southwest portion of the WSA.

Conclusion: Designation of this WSA would protect 3,780 acres of crucial desert bighorn sheep, and 4,460 acres of desert tortoise and Gila monster habitat. All three state-listed species would benefit from prohibiting motorized vehicle use and mineral development in the WSA. Migration patterns of desert bighorn sheep may be disrupted by the 1,750 VDY, all associated with nonmotorized recreational pursuits.

IMPACTS ON CULTURAL VALUE

Designation would benefit the cultural resources within this WSA. There is likely to be at least one *National Register* quality site which would benefit from the restrictions placed on mining activities as well as the prohibition of vehicle based visitation. The elimination of motorized access would reduce considerably the potential for vandalism and erosion to these cultural resources.

Conclusion: Wilderness designation will beneficially affect one potential *National Register* site as well as all cultural resources present in the WSA by eliminating motorized visitation and the resulting vandalism and erosion.

No other resources would be impacted by this alternative.

APACHE BOX WSA
(AZ-040-76) - 932 ACRES

Proposed Action/No Wilderness Alternative (Map 2-15)

The *Proposed Action/No Wilderness* alternative would return 932 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Apache Box WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values would experience adverse impacts from a mining exploration program and associated vehicle use.

One mining exploration would impair the natural character of the area and disturb two acres. (Presently this area has some evidence remaining from previous mineral exploration activity and is reached by a one-mile long cherrystemmed road.) Opportunities for solitude and primitive recreation and the visitor's perception of naturalness would be lost on about 100 acres.

The existing quality and array of primitive recreation opportunities would decline in the vicinity of mining exploration. The loss of naturalness and scenic features in portions of the WSA, the sights and sounds of exploration and vehicular access would be the primary factors causing the loss or deterioration of primitive recreation opportunities. Hiking and sightseeing opportunities would be impaired over 100 acres in the central portion of the canyon area—a result of mining exploration work. The loss of these opportunities would be mostly offset by the abundance of similar opportunities throughout the region.

Vehicles on cherrystemmed roads would lessen the quality of solitude and primitive recreation opportunities on about 100 acres of the WSA. Nonmotorized recreationists may encounter vehicles, thus reducing the quality of the recreation experience.

Conclusion: The *No Wilderness* alternative would not prevent adverse impacts to wilderness values. As a result, motorized vehicle use, mining exploration activity and associated vehicle use would cause a loss or impairment of the wilderness values of naturalness, solitude and primitive opportunities on about 11 percent of the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *Proposed Action/No Wilderness* alternative there is no impact on mineral development.

Conclusion: The *Proposed Action/No Wilderness* alternative would not impact mineral development.

IMPACTS ON RECREATION USE

Opportunities for motorized and nonmotorized recreation activities in the Apache Box WSA would remain unchanged under the No Wilderness alternative.

Conclusion: Opportunities for recreation use would not change under the *No Wilderness* alternative.

IMPACTS ON CULTURAL RESOURCES

Mineral exploration activities on the 93 claims could occur and visitor use would continue. The cultural resources would be threatened by these actions and could be adversely affected by indirect actions such as vandalism and erosion.

Conclusion: Nondesignation would result in continued and new adverse impacts from mineral exploration and visitor use.

No other resources would be impacted by this alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

Wilderness values of naturalness, solitude and primitive recreation over portions of the WSA would be impaired by mineral exploration and associated motorized vehicle use.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Mineral exploration would disturb the naturalness of portions of the area in the short term. In the long term the area would return to a natural condition since no mineral development is expected.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Wilderness values of naturalness solitude and primitive recreation would be impaired on about 100 acres of the unit.

All Wilderness Alternative (Map 2-15)

The *All Wilderness* alternative would designate 932 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Apache Box WSA would provide long-term legislative protection for its wilderness values.

Precluding mineral exploration activity would maintain the existing wilderness values in the WSA. Moreover, the perception of naturalness and the quality of solitude and primitive recreation opportunities would be sustained across a larger 100-acre area.

Because no mineral exploration activity would occur under the *All Wilderness* alternative, the cherrystemmed road would become unusable due to natural processes (revegetation, erosion and bank sloughing). Since vehicles would no longer be able to drive the road, impacts to naturalness, solitude and primitive recreation would not occur. Wilderness visitors would not see or hear vehicles on about 100 acres of the WSA presently affected by motorized use.

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across the WSA.

IMPACTS ON MINERALS DEVELOPMENT

Under the *All Wilderness* alternative, 932 acres of federal mineral estate would be withdrawn from mineral entry and future exploration activities would be stopped, including one proposed exploration activity.

Conclusion: The *All Wilderness* alternative would stop future exploration projects but would not affect mineral production since none is expected.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation. Impacts from vehicles on the cherrystemmed road would not occur because the road would not be maintained and vehicles would no longer use it.

Conclusion: The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 932 acres.

IMPACTS ON CULTURAL RESOURCES

Under wilderness designation, mineral exploration and vehicle access would be prohibited. This would reduce the potential for direct impacts from these activities and reduce the potential for indirect impacts such as vandalism and erosion.

Conclusion: Designation would have a beneficial effect on the cultural resources by prohibiting impact-causing activities.

No other resource would be impacted by this alternative.

HOVERROCKER WSA
(AZ-040-77) - 2,791 ACRES

Proposed Action/No Wilderness Alternative (Map 2-15)

The *Proposed Action/No Wilderness* alternative would return 2,791 acres to other resource uses.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

None of the Hoverrocker WSA's wilderness values would receive the legislative protection provided by wilderness designation. Over the long term, wilderness values in the entire area are not expected to be adversely affected.

Conclusion: The *Proposed Action/No Wilderness* alternative would not adversely impact wilderness values.

IMPACTS ON RECREATION USE

Opportunities for recreation activities in the Hoverrocker WSA would remain unchanged under the *Proposed Action/No Wilderness* alternative.

Conclusion: Opportunities for recreation use would not change under the *Proposed Action/No Wilderness* alternative.

IMPACTS ON CULTURAL RESOURCES

Visitor use is the only activity that would continue in this WSA. The cultural resources could be adversely affected by indirect actions such as vandalism.

Conclusions: Nondesignation could result in adverse impacts from vandalism.

No other resources would be impacted by the alternative.

ADVERSE IMPACTS WHICH CANNOT BE AVOIDED

No adverse impacts are anticipated.

RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Continued nonmotorized recreational uses would not affect long-term productivity.

IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

There would be no irreversible or irretrievable commitments of resources.

All Wilderness Alternative (Map 2-15)

The *All Wilderness* alternative would designate 2,791 acres as wilderness.

Under this alternative the following environmental consequences are anticipated.

IMPACTS ON WILDERNESS VALUES

Wilderness designation of the entire Hoverrocker WSA would provide long-term legislative protection for its wilderness values. There are no projected activities that would affect the existing wilderness values.

Conclusion: Wilderness designation under the *All Wilderness* alternative would maintain the wilderness values of naturalness, solitude and primitive recreation across the entire WSA.

Conclusion: The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 2,791 acres.

No other resources would be impacted by this alternative.

IMPACTS ON RECREATION USE

The *All Wilderness* alternative would enhance opportunities for nonmotorized recreation use on 2,791 acres.

Chapter 5

CONSULTATION AND COORDINATION

CHAPTER 5

CONSULTATION AND COORDINATION

Introduction

The Arizona Mohave Wilderness Environmental Impact Statement was prepared by an interdisciplinary team of resource specialists from the Phoenix and Safford Districts. Preparation of the EIS began in October 1986. The planning and wilderness study process that preceded the preparation of this draft EIS began in the fall of 1978 with the initial wilderness inventories. This process involved many steps—the wilderness inventories, then public participation, interagency coordination, preparation of Management Framework Plan and Resource Management Plan recommendations and then the EIS process. Consultation and coordination with other agencies, organizations and individuals occurred in a variety of ways throughout the planning and environmental process.

Scoping and Public Participation

The Districts invited public participation throughout the development of this EIS. The following list summarizes the actions taken:

1978-1979	Initial wilderness inventory and public comment period
1979-1980	Intensive wilderness inventory and public comment period
1980-1986	BLM study and planning process
September 1986	Letters mailed to the district mailing lists of 2,500
September 1986	Notice of intent to prepare the EIS
September 1986	Letters to the tribal leaders
October 1986	Public meetings held in Kingman and Phoenix, Arizona

Consultation With Other Agencies

The federal agencies that manage lands close to or adjacent to the wilderness study areas were sent letters in September 1986, stating the BLM was going to prepare an environmental impact statement covering fifteen wilderness study areas in Arizona. The accompanying map shows the location of the areas involved in the EIS. The letters were also sent to twelve Indian tribal leaders.

During the preparation of the draft document the resource specialists contacted the local offices of federal and state agencies to obtain information and discuss the study process with them.

In writing the *Proposed Action* and alternatives, the status and planned uses of adjacent and nearby lands were considered. The draft General Management Plan for the Lake Mead National Recreation Area was used to identify the planned uses for the adjacent Recreation Area Lands. The adjacent Recreation Area Lands proposed uses were stated in *Chapter 3* of the *draft EIS* under the Wilderness Values section for each WSA adjacent to Recreation Area Lands.

On April 25, 1988 the Kingman Resource Area Manager and the Recreation Specialist met with Lake Mead National Recreation Area (LMNRA) managers to discuss the BLM recommendations for the six WSAs that adjoin the LMNRA. Five of the WSAs' recommendations are consistent with the NPS's "Management Zonings" for the adjacent LMNRA-managed lands. The recommendations for Grapevine Wash conflict with NPS's management zoning. The BLM recommendation for Grapevine Wash is nondesignation and NPS's for the adjacent area is a "National Environment Subzone," essentially the maintenance of present wilderness-type conditions.

The State Game and Fish Agencies were contacted to obtain wildlife population numbers and their plans for wildlife management in the study areas. Habitat needs and then proposed developments were worked out in conjunction with the state agencies.

The U.S. Fish and Wildlife Service was contacted to obtain data on the threatened and endangered species and their habitat in the study areas.

In addition, throughout the planning process BLM specialists met in the field and at other locations to consult with the Soil Conservation Service, Arizona Land Department and Arizona Game and Fish Department to check resource data, coordinate methodologies and exchange information.

List Of Agencies, Organizations, Indian Tribes And Elected Officials To Whom Copies Of The Draft Were Sent

The BLM requested comments on the draft EIS from affected grazing permittees, interested individuals, federal, state and local agencies, elected officials and interest groups. Due to the size of the mailing list (more than 1,000), the following is a partial list of those who received copies of the document:

ELECTED OFFICIALS

Federal

ARIZONA

Senator Dennis DeConcini
Senator John McCain
Representative Bob Stump
Representative Morris K. Udall
Representative Jim Kolbe
Representative Jon Kyl
Representative Jay Rhodes

NEW MEXICO

Senator Pete D. Domenici
Senator Jeff Bingaman
Representative Joe Skeen

State

ARIZONA

Governor Evan Mecham
All State Senators
All State Representatives

NEW MEXICO

Governor Garrey Carruthers

FEDERAL AGENCIES

Advisory Council on Historic Preservations
Environmental Protection Agency
Department of Agriculture
- Agricultural Stabilization and Conservation Service
- Economics Statistics Service
- Forest Service
- Science and Education Administration
- Soil Conservation Service

Department of Defense
- Corps of Engineers
- U.S. Air Force
- U.S. Marine Corps

Department of the Interior
- Bureau of Indian Affairs
- Bureau of Reclamation
- Fish and Wildlife Service
- Geological Survey
- National Park Service
- Bureau of Mines

ARIZONA STATE AGENCIES

Arizona Commission of Agriculture and Horticulture
Arizona Department of Health Services
Arizona Department of Library, Archives and Public Records
Arizona Department of Transportation
Arizona Game and Fish Department
Arizona Natural Heritage Program
Arizona Office of Economic Planning and Development
Arizona Outdoor Recreation Coordinating Commission
Arizona State Clearinghouse
Arizona State Historic Preservation Officer
Arizona State Land Commissioner
Arizona State Parks Board
Arizona State University
Arizona Water Resources Department
Attorney General's Office
Governor's Commission on Arizona Environment
Mineral Resource Department
Museum of Northern Arizona
Northern Arizona University
University of Arizona

NEW MEXICO STATE AGENCIES

New Mexico Bureau of Mines and Mineral Resources
New Mexico Department of Game and Fish

LOCAL AGENCIES

Big Sandy Natural Resources Conservation District
Buckeye-Roosevelt Natural Resource Conservation District
District IV Council of Governments
Grant County Commissioners
Greenlee County Board of Supervisors
Maricopa Association of Governments
Maricopa County Board of Supervisors
Maricopa County Planning and Zoning Commission
Mohave County Board of Supervisors
Mohave County Community College
Mohave County Library
Mohave County Planning and Zoning Commission
Northern Arizona Council of Governments
Phoenix Public Library
Wickenburg Resource Conservation District
Yavapai College
Yavapai County Board of Supervisors
Yavapai County Planning and Zoning Department
Yuma County Board of Supervisors
Yuma County Planning and Zoning Department

INDIAN TRIBES AND COUNCILS

Chemehuevi Tribal Council
Colorado River Indian Tribes
Fort Mohave Tribal Council
Havasupai Tribal Council
Hopi Tribal Council
Hualapai Tribal Council
Navajo Tribal Council
Tohono O'odham Council
Tonto Apache Tribal Council
San Carlos Council
Salt River-Pima-Maricopa Indian Community Council
Yavapai-Prescott Board of Directors

OTHER ORGANIZATIONS

Animal Defense Council
Arizona Cattle Growers Association
Arizona Desert Bighorn Sheep Society
Arizona Farm Bureau Federation
Arizona Humane Society
Arizona Livestock Production Credit Association
Arizona Mining Association
Arizona Prospectors and Small Mine Operators Association
Arizona Wildlife Federation
Arizona Wool Growers Association
Arizona 4-Wheel Drive Association
Audubon Society
Defenders of Wildlife
Desert Tortoise Council
Development Corporations
Federal Land Bank Association
International Society for the Protection of Mustangs and Burros
Izaak Walton League of America
Kingman Grazing Advisory Board
League of Women Voters
Legal Organizations
Maricopa County Farm Bureau Federation
Mining Companies
Multiple-Use Advisory Council, Phoenix District
National Audubon Society
National Council of Public Land Users
Natural Resources Defense Council, Inc.
News Media
Oil and Gas Companies
ORV Clubs
Phoenix-Lower Gila Resource Areas Grazing Advisory Board
Public Lands Council
Public Lands Institute
Rockhound Clubs
Save the Mustangs
Sierra Club
The Wilderness Society
Utility Companies
Wild Burro Protection Association
Wild Horse Organized Assistance
Wildlife Management Institute
Wildlife Society

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CONSULTATION AND COORDINATION

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Review Process

The draft EIS was filed with the Environmental Protection Agency on October 2,1987 and their notice of receipt was published in the *Federal Register* on October 9, 1987. The comment period extended through January 8, 1988. The Bureau of Land Management's notice of availability and announcement of public hearings was also published in the *Federal Register* on October 9, 1987.

More than 1300 copies of the draft EIS were distributed to federal, state and local government agencies, organizations and individuals for review and comment. News releases provided information about obtaining copies of the draft EIS and time, date and locations of the scheduled public hearings.

The Bureau of Land Management held public hearings to receive oral testimony from the interested public on the draft EIS in Clifton, Kingman and Phoenix, Arizona and Silver City, New Mexico. All hearings were opened at 7:00 PM. The public hearing in Clifton, Arizona was held November 17, 1987 and one person spoke. The Silver City, New Mexico hearing was held November 18, 1987 and four persons spoke. The Kingman, Arizona hearing was held December 1, 1987 and twenty persons spoke. The Phoenix, Arizona hearing was held December 2, 1987 and six persons spoke. The hearing transcripts are printed in this document following the written comments received.

The written comments that were received regarding the draft EIS are published in this document. The EIS team and management reviewed all comments and responded to those questioning the analysis or raising issues related to the environmental impacts of the Proposed Action and alternatives. All comments, however, will be considered by BLM managers in making the final recommendations for wilderness.

Written Comments and Hearing Transcripts

The written comments are grouped by (1) Federal, (2) State, (3) Cities, (4) Organizations and (5) Individuals. No elected officials, Indian tribes or local agencies submitted written comments. The comments are numbered in the order of their receipt.

Those numbers with a single asterisk (*) represent letters with individual written responses. The numbers with double asterisk (**) represent letters that were not published and all related to the same WSA and were presenting almost the identical proposal and recommendation (see page 5-66).

Responses to the hearing transcripts follow the transcripts (see page 5-67).

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1

DEPARTMENT OF THE AIR FORCE
REGIONAL CIVIL ENGINEER, WESTERN REGION (AFESC)
630 SANSOME STREET - ROOM 1316
SAN FRANCISCO, CALIFORNIA 94111-2275

OCT 06 1987

REPLY TO ATTN OF: ROVP (Farrel/0882)

SUBJECT: Arizona Mohave Wilderness Draft Environmental Impact Statement (DEIS)

TO: EIS Team Leader,
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Rd.
Phoenix, AZ 85027

1. We appreciate the opportunity to review the subject DEIS and offer the following comments:

a. As shown on the attached map, many of the Wilderness Study Areas (WSA's) evaluated in your DEIS are subject to military overflights in the form of low-level training missions. Inasmuch as low-level overflights do have the potential to disrupt the solitude and naturalness of areas directly under their flight paths, we recommend you include consideration of such activities in your discussion and decision-making process. Within that context, we further recommend you consider location, altitude, and frequency of flights.

b. Areas which are appropriate for military overflights and low altitude training routes are becoming increasingly rare. In selecting overflight training routes, the Air Force must consider mission requirements and fuel costs as well as environmental constraints. Ideally, training routes are located within areas which are relatively isolated, have diverse topography and minimal commercial activity, maintain sparse human populations, and contain lands under federal jurisdiction. It is obvious that these characteristics are also compatible to a large degree with potential wilderness areas. Therefore, even though several of the areas being proposed are subject to air training activities, the Air Force generally supports designation of wilderness areas provided such designations, and subsequent management thereof, do not restrict use of the airspace for military overflights.

2. We hope these comments are useful in your planning process. If we can be of assistance in any manner, please contact the undersigned or Mr. David Farrel at (415) 556-6439.

PHILLIP E. LAMMI, Chief
Environmental Planning Division

1 Atch: Training Routes Map

cc: AF/LEEVX
AFREP/FAA

1/6

2

October 7, 1987

EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Rd.
Phoenix, AZ 85027

Subject: Arizona Mohave Draft Environmental Statement, dated September 1987

Dear Sir:

The unit in this DEIS that I am knowledgeable about and wish to comment on is Ragged Top WSA 2-197. This unit has suffered from years of improper and illegal evaluation by your agency. The evaluation of this unit has been comparable to the RARE I study on USFS roadless lands which was determined to be illegal by the Federal Court System. Originally the BLM defined the unit as a 7600 acre WSA. The El Paso gas pipeline access way (not open to the public) was considered a road. By RARE II criteria this should have been considered a way with a grandfathered access right for El Paso Gas. The actual roadless area considered should have been
2-1 well over 15,000 acres with approximately 15,000 acres recommended for wilderness designation. The impacts you described as a reason for reducing the WSA to 4460 acres and then dropping are trivial compared to those in some other designated wilderness areas in the country, i.e. the popular Hoover Wilderness in the Eastern Sierra Nevada of California.

Ragged Top is truly an outstanding Sonoran Desert natural area that deserves wilderness designation. It is in easy range of Tucson for day-use recreation. It includes some of the best saguaro/palo-verde vegetative community remaining in Arizona. The DEIS admits the remaining 4460 acres being considered are critical habitat for (pp.64, 116, 172):

- desert tortoise - 3500 acres
- desert bighorn sheep - 2280 acres
- Gila monster - entire area

In fact all 15,000 acres that should be designated wilderness are critical habitat for one or more of the above.

You (BLM) admit that 21% of the 4460 acres and one National Register quality cultural site will be lost to special interest abuses (ORV's in particular) if the area is not designated wilderness (pp.64, 116, 171, 172.) The remainder of the 15,000 acre pristine area would suffer similar damage.

2-2 You project no impact on wildlife management from wilderness designation (pp. 3, 49.) The two potential small mines should be acquired.

In summary, Ragged Top WSA 2-197 is a far too important natural area not protect as a wilderness area. In addition the entire 15,000 pristine acre area that should have been studied should be designated wilderness. I have forwarded my input and concerns for the area to AWC for their consideration in their proposal.

Sincerely,

Jim Notestine

P.O. Box 461
Sonoita, AZ 85637

2-1 The initial wilderness inventory of Ragged Top included 8,480 acres. Other areas of land in the vicinity of Ragged Top were also chosen because of initial qualification as wilderness. However, the later, more intensive inventory recommended Ragged Top and these other units be dropped from further consideration because of mining activities, powerline and pipeline rights-of-way and numerous roads throughout the area. Public comments disagreed with dropping the unit and supported a WSA of under 5,000 acres, resulting in the present WSA of 4,460 acres. The BLM manager considered all factors in choosing these 4,460 acres as the area with the best wilderness characteristics.

The other 4,020 acres were dropped because of human imprints -- a two-mile long, much used road, a series of jeep trails, access roads, mining activities and a power line.

The vehicle access route associated with the El Paso gas pipeline is a road by BLM criteria, thereby precluding annexation of a larger area. It is understandable that this could be a point of disagreement. RARE II standards, as used by the U.S. Forest Service for wilderness review, are not applicable to BLM wilderness review.

During BLM's nationwide request for comments on the Wilderness Policy and Review Procedures in 1978, more than 5,000 letters and comments were received. Of all the issues raised by the public, the road definition received the most comment. As a result of the public comments BLM performed all wilderness inventories, using the road definitions exactly as quoted in the legislative history which authorized the wilderness review (House Report 94-1163).

Briefly, the House Report states that roads are improved and maintained by mechanical means to ensure relatively regular and continuous vehicle use. (No mention is made about private or public use.) Since the route along the El Paso gas pipeline is maintained by mechanical means for regular and continuous vehicle use, BLM properly inventoried the route as a road.

2-2 Other actions and designations may be used to protect various natural resources. The Draft Phoenix Resource Management Plan/Environmental Impact Statement (1987) is exploring these other processes now. The RMP/EIS recommends a 56,800 acre Silver Bell Desert Bighorn Sheep Management Area -- which includes the Ragged Top WSA. Planned actions for management of the area include: 1) no surface occupancy for oil and gas development on 800 acres of Ragged Top, 2) limiting motorized vehicle use to existing roads and trails, 3) closing 800 acres on Ragged Top to motorized vehicles and 4) acquiring 11,450 acres of state land and 6,180 acres of private land.

We realize that Ragged Top is a valuable asset and believe that alternate ways of protecting the land and resources -- aside from wilderness designation -- would keep this resource from the damaging effects of ORVs, oil and gas surface occupancy and other developments.

3

ARIZONA STATE PARKS

800 W. WASHINGTON
SUITE 415
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GOVERNOR

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KENNETH E. TRAVOUS
EXECUTIVE DIRECTOR

COURTLAND NELSON
DEPUTY DIRECTOR

October 13, 1987

Henri R. Bisson
District Manager
DOI Bureau of Land Management
2015 West Deer Valley Road
Phoenix, AZ 85027

RE: Draft EIS , Arizona Mohave, DOI BLM

Dear Mr. Bisson:

I have reviewed the draft environmental impact statement (EIS) for the wilderness designation of wilderness study areas in the Phoenix and Stafford Districts of Arizona. The report appears to adequately consider the cultural resources of the project areas at this stage of investigation. Pursuant to 36 CFR, Part 800 of the Advisory Council's regulations ("Protection of Historic and Cultural Properties"), we look forward to continuing the consultation process regarding the cultural resources of this project.

We appreciate your cooperation with this office in complying with the historic preservation requirements for Federal undertakings. If you have any questions, please contact me.

Sincerely,

Robert E. Gasser
Archaeologist & Compliance Coordinator

for Shereen Lerner, Ph.D.
State Historic Preservation Officer

CONSERVING AND MANAGING ARIZONA'S HISTORIC PLACES, HISTORIC SITES, AND RECREATIONAL, SCENIC AND NATURAL AREAS

4

United States Department of Agriculture

Soil Conservation Service

201 East Indianola
Suite 200
Phoenix, Arizona 85012

October 22, 1987

EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Road
Phoenix, AZ 85027

Gentlemen:

We have reviewed the Draft Environmental Assessment for the wilderness designation of wilderness study areas in the Phoenix and Safford Districts of Arizona and have no comments to add.

Thank you for the opportunity to review this document.

Sincerely,

Verne M. Bathurst
State Conservationist

5

2921 NE 53rd Street
Lighthouse Point, Florida 33064
November 7, 1987

EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Road
Phoenix, Arizona 85027

Dear Mr. Bissonr

Regarding the Arizona Mohave Draft Wilderness Environmental Impact Statement,

I support the All Wilderness alternative for all the wilderness Study areas.

It is important that as much as possible of our wilderness heritage be preserved forever in the National Wilderness Preservation System. I have traveled in Arizona twice. These areas are need for their cristitive, wildlife, recreational, and scenic values. Thank you for this opportunity to comment on the Draft Statement.

Sincerely,

Reed Secord

Reed Secord

6

United States Department of the Interior

BUREAU OF RECLAMATION
LOWER COLORADO REGIONAL OFFICE
P.O. BOX 427
BOULDER CITY, NEVADA 89005

IN REPLY REFER TO: LC-159

NOV 16 1987

Memorandum

To: EIS Team Leader, Phoenix District Office, Bureau of Land Management, 2015 W. Deer Valley Road, Phoenix, Arizona 85027

From: Regional Environmental Officer

Subject: Review of Draft Wilderness Environmental Impact Statement (EIS) for the Arizona Mohave Wilderness Areas (your notice of September 1987)

We have reviewed the subject EIS and find that the proposed wilderness study areas would not impact our projects.

William E. Rinne

Mr.& Mrs. Robert Huffman
P. O. Box 35
Dolan Springs, AZ 86441
November 6, 1987

7

EIS Team Leader, Bureau of Land Management,
Phoenix Dist. Office, 2015 W. Deer Valley Rd.
Phoenix, AZ 85027

Ref: Mt. Tipton WSA (Unit #2-012)
(AZ-020-12/42) 34,060 acres

Gentlemen:

We are year-round residents of Dolan Springs and live in the area directly to the west of the study area, about 3 miles below Lower Indian Springs area of Mt. Tipton and the area referred to in your study as the Corbat Pinnacles.

7-1 Please protect this entire area of your study in order that our grandchildren and others who come after us will also be able to enjoy a true purple mountain majesty at sunset. Until we moved here from Texas three years ago, I did not understand that phrase in "America the Beautiful". I hope you can protect and preserve that majestic sight for all the people who come to this area so close to the Lake Mead National Recreation Area.

Being a bird-watcher, I can tell you from my sightings of a number of nesting pairs of birds, including Swainson's Hawks, Golden Eagles, Redtail Hawks and many raptors. There are many ravens about in the sky every day, many vultures and hawks on the wing here the year-round, including a Turkey Vulture who set down on a Mohave yucca not 200 yards from where I sat watching! We have a number of families of Gambel's quail who come through our yard morning and evening. You can hear them in the morning, calling each other. Such a love sound.

Another lovely sound is the singing of the coyotes in the evening. There are a number of dens up on the mountains and they come down to feed sometimes. There has even been a bobcat in my front yard. Probably came after some of cottontail and black-ear jackrabbit who live in the area. I understand there are muledeer and wild horses in the mountains, but I haven't seen them so I cannot attest to that. But the others I have mentioned are residents, and most welcome residents at that. We do so hope their home will be preserved in its native wilderness state.

There is only one small blight on the vast panorama of the Mt. Tipton area, the small pockmark on an otherwise pristine wilderness mountainside. I speak of the Upper Indian Springs spot. Other than that and the trail to it from Lower Indian Springs, there are very few trails up the mountain. It is a vast rugged expanse of wilderness which it conveys. Something that is very quickly swallowed up by a determined land developer. Please make the area a wilderness area and save it from the future bulldozer, so it can be shared with those who come after.

Please consider the grace and dignity Mt. Tipton and its surrounding area and the Pinnacles lend to our land. No open pit mines Please! When we moved here, and the others moved here to enjoy the grandeur of the country, we did not want it spoiled as it has been in the Chloride area. Just look at the Cerbats behind Chloride and see the pock-marked look the mountains have taken on in just the last few years. Look what an open pit mine can do to the beauty of the mountains - just look at the open pit copper mine between Chloride and Kingman. That mark will not fade for centuries to come.

7-2 One more comment upon your study and I will close. Do you realize that the harvesting of 280 acres of Mohave Yucca will kill off or displace a large number of the native birds and the Yucca Moth? Largely the cactus wren, but also a number of songbirds make their nests here in the yucca near Mt. Tipton. It not only provides them with a home, but also food. The Yucca Moths that come in cycles would be extinguished - non-existant - extinct. Please do not continue the past practice of harvesting yucca.

Our high desert here in Mohave County has a unique balance which we look to the Bureau of Land Management to preserve and protect for generations to come. To hear the quail in the quail grass in the early morning, calling to each other is truly an experience unlike any other. It is an experience which I hope many of you can share by camping out in the Mt. Tipton Wilderness Area.

Thank you for the chance to express our thoughts and opinions during your study of the Mt. Tipton and Pinnacles Wilderness Study.

Sincerely,

Robert L. Huffman

Robert L. Huffman
Karen F. Huffman

7-1 BLM recommends for wilderness designation 28,170 acres (83% of the study area) to protect the wilderness values you wrote about. The other 5,890 acres are in an irregularly shaped appendage which is difficult to manage for wilderness, plus these acres have high potential for minerals.

7-2 Thank you for your letter about the harvest of Mohave yucca and for the information on the relationship of the cactus wren, the yucca moth and yucca. Under BLM's Proposed Action (see AZ-Mohave draft EIS, p. 141) no harvesting of yucca would occur on the 280 acres. In fact, no harvesting of yucca would be allowed in the entire designated area.

8

SIERRA CLUB

University of Arizona Student Chapter

31 Oct. 1987

William Carter
EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Rd.
Phoenix, Arizona 85027

Thank you for the opportunity to comment on the Arizona Mohave Wilderness DEIS.

The University of Arizona student chapter of the Sierra Club supports the "All Wilderness" alternative for the Ragged Top WSA. Wilderness designation of this WSA would have primarily positive consequences regarding four of the five issues identified as being relevant to the area, i.e. wilderness values, recreation uses, wildlife values, and cultural values.

Wilderness values would clearly be best protected by designation. The Ragged Top WSA is a spectacularly scenic area and merits preservation. Although the WSA is relatively small, the dense creosote bush, ironwood, mesquite, and saguaro vegetation provides a good degree of screening, making the unit seem more remote and enhancing solitude.

As mentioned in the DEIS, the recreational value of the WSA is superior. Few areas support such a diverse array of outstanding recreational opportunities as Ragged Top. Hiking, climbing, wildlife viewing, photography, hunting, and sightseeing are all activities which would best be accomodated and maintained by Wilderness designation.

Perhaps most importantly, Wilderness designation would protect the impressive wildlife values in the WSA. The BLM proposed alternative of no wilderness designation would result in the effective loss of 600 acres of crucial desert bighorn sheep habitat. This would have dire consequences for the estimated 20 to 35 sheep that roam the WSA. In addition, the loss of tortoise, spotted bat, and other species habitat would occur. Wilderness designation would protect the wildlife values of the area.

Having read the DEIS, the only reason apparent to us for the BLM not supporting Wilderness designation is that such designation may preclude the possible development of two small mines and two exploration plans. This kind of trade-off comes at far too high a price.

We ask the BLM to reconsider it's proposed alternative and recommend the "All Wilderness" alternative for the Ragged Top WSA.

Sincerely,

Arthur N. Basher

Arthur N. Basher
Chairman

9

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
ECOLOGICAL SERVICES
3616 W. Thomas, Suite 6
Phoenix, Arizona 85019
November 27, 1987

MEMORANDUM

To: District Manager, Bureau of Land Management, Phoenix District Office, Phoenix, Arizona

From: Field Supervisor

Subject: Draft Arizona Mohave Wilderness Environmental Impact Statement (LCD 87/75)

Thank you for providing this office of the Fish and Wildlife Service (Service) with a copy of the subject document.

The Service has reviewed the Draft Arizona Mohave Wilderness Environmental Impact Statement (EIS) and offer the following comments for your consideration.

COMMENTS

Generally, the Service supports the Bureau of Land Management's (Bureau) proposed action to recommend as suitable for wilderness designation all or portions of six Wilderness Study Areas (WSAs) totalling 202,210 acres. We believe that the Bureau has produced an excellent document and commend you for your efforts to include as much acreage as possible.

We do, however, recommend that the Bureau consider additional acreage for wilderness designation. Such a designation is usually considered beneficial for wildlife resources because it precludes development and necessitates human use limitations in these areas which otherwise would be susceptible to loss or degradation of wildlife habitat.

The Service is also concerned that existing water catchements designated for wildlife would continue to be maintained as determined necessary by the Arizona Game and Fish Department (AGFD) after a WSA has been designated Wilderness Area Status. We recommend that your agency work with AGFD to determine the essential catchements that need to be maintained by motor vehicle and allow provisions in this EIS to accomodate this concern.

The Service appreciates the opportunity to review [illegible] and have any questions concerning our comments, please contact Jeff Krausman or me (Telephone: 602/261-4720 or FTS 261-4720).

Sincerely,

Sam F. Spiller
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico (Fish and Wildlife Enhancement)
Park Supervisor, Lake Mead National Recreation Area, Boulder City, Nevada
Director, Arizona Game and Fish Department, Phoenix, Arizona
Regional Supervisor, Arizona Game and Fish Department, Kingman, Arizona

17

3635 North Harvard Avenue
Kingman, AZ 86401
November 30, 1987

EIS Team Leader, Bureau of Land Management
Phoenix District Office
2015 W Deer Valley Road
Phoenix, AZ 85027

Gentlemen:

Please find enclosed my comments on the Draft Environmental Impact Statement for the Wilderness Designation of the Wilderness Study Areas in the Phoenix and Safford Districts of Arizona.

Yours Truly

James A. Collier

Comments on the Draft Environmental Impact Statement for the Wilderness Designation of the Wilderness Study Areas in the Phoenix and Safford Districts of Arizona.

Introduction

I would like to comment on this environmental impact statement as a trained scientist and as a citizen concerned with the preservation of wilderness. Wilderness areas in Arizona are valuable scientific reserves where fragile desert plant and animal communities, geological and archeological formations are protected from the impact of man. Wilderness areas also provide valuable solitude for those individuals who take the time and effort to travel into them.

The setting aside of suitable land areas to be managed as wilderness is becoming relatively more important in Arizona as the state's population dramatically increases. In the fifteen years between 1970 and 1985 the population has grown from 1,790,300 to 3,156,000 a 76% increase. (Arizona Department of Economic Security Population Estimates of Arizona, 1981, and Newsletter, Winter, 1986). Arizona's population is expected to increase 54% between 1985 and the year 2000 to 4,860,300. These rates place Arizona among the fastest growing states in the United States. Northwestern Arizona is experiencing even more rapid growth along the Colorado River.

In addition to an increasing permanent population Arizona experiences a large influx of winter visitors who utilize the land, rivers and lakes for recreation.

This large increase in permanent residents and transient visitors means a corresponding increase in the recreational use of land including use of various forms of motorized transportation. Boats and various forms of off road vehicles provides access to many otherwise isolated areas. This disturbance places stress on resident animal populations. Off road vehicle use also damages fragile desert plant communities. Areas of archeological and geological interest often become degraded as visitation increases. Because these impacts are lower in wilderness areas it is very important to establish such areas in Arizona.

Specific Wilderness Areas of the Draft Proposal

Van Deeman

This small area is adjacent to proposed wilderness in the Lake Mead National Recreation Area. It contains valuable desert big horn sheep (Ovis canadensis) , habitat which will be disturbed by mining activity in the future, therefore, I disagree with the proposed action (no wilderness) and propose that Van Deeman be classified all wilderness.

Mockingbird and Mount Davis

A number of sections of land have been acquired by the Bureau of Land Management between the Mockingbird and Mount Davis areas. These additional lands connect the two areas producing one large land area under public control. These areas should be inventoried under Section 202 of the Wilderness Act and a new wilderness study area composed of Mockingbird, Mount Davis and the acquired area should be proposed. This area contains valuable desert big horn sheep habitat and is adjacent to proposed wilderness in the Lake Mead National Recreation Area. Therefore, I disagree with the proposed action (no wilderness) and propose that these areas be inventoried, combined into a larger wilderness study area and be classified as all wilderness.

Black Mountains North

I agree with the proposed action (partial wilderness)

Burns Spring

I agree with the proposed action (partial wilderness)

Mount Tipton

Mount Tipton is a highly scenic area worthy of wilderness classification. I would prefer to leave in an isolated area in the southwestern portion of this wilderness study area. Also it is important to include the additional sections of land to the east of the area as proposed. I basically agree with the proposed action (partial wilderness) for Mount Tipton.

Grapevine Wash

Grapevine Wash, a small wilderness study area, borders Grand Canyon National Park and Lake Mead National Recreation Area. Recently additional land south of Grapevine Wash has been acquired by the Bureau of Land Management. This additional land should be inventoried and added to the present Grapevine Wash Wilderness Study Area. The Grapevine Wash area was previously studied for inclusion in Joshua Tree National Park and was found aesthetically suitable except for the checkerboard land ownership found in the area. Since this problem has been alleviated, Grapevine Wash is now an excellent candidate for wilderness status. Therefore, I disagree with the proposed action (no wilderness) and propose that this area and recently acquired lands bordering it be combined into a larger wilderness study area. This area should then be classified as all wilderness.

Grand Wash Cliffs

I agree with the proposed action (no wilderness) because this area has been heavily overgrazed and contains many primitive jeep trails.

Mount Nutt

The Mount Nutt Wilderness Study Area contains some of the best wilderness in Arizona. The entire proposed wilderness study area is very scenic, includes a number of natural springs and is important desert big horn sheep habitat. Because some of the most scenic areas are in the vicinity of Thumb Butte. This area should be included in the wilderness designation. If not included in the wilderness classification, this area will be disrupted by mining in the future. Therefore, I disagree with the proposed action (partial wilderness) and agree with the all wilderness alternative which includes the Thumb Butte area.

Warm Springs

Warm Springs Wilderness Study Area contains prime desert big horn habitat including lambing grounds and a number of important springs and watering tanks. The wedge of land in the south central area of the wilderness study area is isolated from the main body of land by roads, one of which assists the BLM in wild burro control and was recently improved. However, it still retains redeeming wilderness value. The most important area, excluded in the proposed action, to be included in the Wilderness Study Area is the McHeffy Butte area. This area contains important desert big horn sheep habitat. Potential future mining in McHeffy Butte will not only displace sheep from this area but also disturb them in neighboring wilderness.

Therefore, I disagree with the proposed action (partial wilderness) and prefer the all wilderness alternative or, at least, an alternative which includes McHeffy Butte in the wilderness classification.

South Bradshaws East

This section of land is located at the southern boundary of Castle Creek Wilderness of the Prescott National Forest. It is, therefore, an extension of this wilderness area. To provide protection from future mining disturbance, I disagree with the current proposal (no wilderness) and propose the all wilderness classification for the South Bradshaws East Wilderness Study Area.

Sierra Estrella

I agree with the proposed alternative (all wilderness) for the Sierra Estrella Wilderness Study Area.

Ragged Top

Ragged Top Wilderness Study Area contains a high quality scenic area in the vicinity of Ragged Top Mountain. This area is a current nesting site for golden eagles, (Aquila chrysaetos), and prairie falcons (Falco mexicanus). Mineral potential in the area is only classified as moderate. I therefore, disagree with the proposed action (no wilderness) and propose the all wilderness classification for Ragged Top.

Apache Box/Hoverrocker

I disagree with the proposed action (no wilderness) and would like to see these small areas, which presently have wilderness characteristics classified as all wilderness.

Submitted by:

James A. Collier

James A. Collier
3635 North Harvard Avenue
Kingman, AZ 86401

34

United States Department of the Interior

BUREAU OF MINES

P. O. BOX 25086
BUILDING 20, DENVER FEDERAL CENTER
DENVER, COLORADO 80225
Intermountain Field Operations Center

December 3, 1987

Memorandum

To: EIS Team Leader, Bureau of Land Management, Phoenix District Office, 2015 West Deer Valley Road, Phoenix, Arizona 85027

From: Chief, Intermountain Field Operations Center

Subject: Review of draft wilderness environmental impact statement, Arizona Mohave

Personnel of the Bureau of Mines, Intermountain Field Operations Center, reviewed the sections of the subject draft environmental impact statement (DEIS) pertaining to "Minerals and Energy Resources," as requested. Comments are made on the basis of literature and record evaluation and field investigations.

Seven of the fifteen WSA's discussed in the draft have been, or are currently being, evaluated by the Bureau of Mines. Both literature evaluation and field examination of those areas have been completed. We have not conducted field investigations in the rest of the WSA's discussed in the document. Our comments are arranged below by area or group of areas according to geographic proximity to one another. The Van Deeman, Mocking Bird, and Mount Davis areas are addressed as a group because of their proximity to one another and because comments about each are similar. We noted that the Bureau of Mines does not appear in the list of Federal agencies on page 177. We also noted that
34-1 salable minerals have not been mentioned in any of the minerals sections in the document. Sand and gravel and possibly other construction materials are probably present in most of the study areas. We suggest that, for completeness, subsequent versions of the document describe salable minerals occurring in the WSA's and discuss the probable environmental consequences of the proposed action on them.

Van Deeman WSA
Mocking Bird WSA
Mount Davis WSA

The minerals and energy resources section of each area (pp. 69, 76, and 96)
34-2 states that either past mining, or current exploration, has been performed on each acre of each study area. We suggest that the wording be changed to state that evidence of past and present mining activity can be found throughout the

34-1 The list of federal agencies has been revised in the final EIS to include the Bureau of Mines. Saleable minerals are present in 12 of the WSAs, as stated at the top of page 9, column 1 in the draft EIS. Because the areas are so remote, BLM sees so little market for leasable minerals that their presence or absence would have no effect on the decision-making process.

34-2 The wording in the draft EIS has been changed to reflect past and present mining activity in all the study areas.

study areas. There is no recorded production from within any of the three study areas, but gold and silver were produced from mines in the Eldorado Pass, Gold Bug, and Mocking Bird mining districts, adjacent to and between the study areas. Although the mining district boundaries may include parts of the
34-3 study areas, there is no record of mining or production from within any of the NSA's. Each mineralS section also states that a "mineralized zone" extends from Boulder Dam on the north to the Mohave and MacCracken Mountains on the
34-4 south. The statement, as used, is ambiguous. We suggest better wording would be: Various types of faults, including detachment faults, and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and MacCracken Mountains on the south. Also,
34-5 we do not agree with the statement that the entire area of each WSA has high potential for gold and silver mineral development. We believe the WSA's have a moderate to high potential for the discovery of gold and silver deposits associated with quartz veins and detachment faults. A high potential for development would be possible only if a deposit previously had been discovered. The minerals and energy resource section of all three areas
34-6 states that the WSA's are considered potentially valuable for oil and gas on the basis of their proximity to the Overthrust Belt. We, however, agree with Ryder (1983, p. C17) who suggests that the hydrocarbon potential of the WSA's should be rated medium, based on the concentrations of Tertiary faults in the areas, which facilitate the leakage and flushing of any earlier-trapped hydrocarbons.

Black Mountains WSA
Barns Spring North WSA

The minerals and energy resources sections of the two areas contain several erroneous statements on pages 78 and 83. Although there may have been limited gold and silver production from within the WSA's, there are no available production records to verify the amount. The same sections also state that a "mineralized zone" extends from Boulder Dam on the north to the Mohave and MacCracken Mountains on the south. This statement is again ambiguous. Here,
34-7 as above, we suggest that better wording would be: Various types of faults, including detachment faults, and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and MacCracken Mountains on the south. We do not agree that the WSA's are considered potentially valuable for oil and gas on the basis of their proximity to the Overthrust Belt. We again agree with Ryder (1983, p. C19) who suggests the hydrocarbon potential of the areas is rated low to zero, based on extensive exposures of Precambrian gneiss, granite, and schist and Tertiary volcanic rocks that are present. Commercial hydrocarbons, if found at all in the WSA's, would be located in those parts of the areas that overlap the flanks of Tertiary basins.

Mount Tipton WSA

In 1987 the Bureau of Mines conducted a field investigation in the Mount Tipton WSA. The following information is based on that study and is in reference to the minerals and energy resources section in the DEIS (p. 86). Prospecting, mining claim location, and oil and gas leasing are the only minerals-related activities that have occurred in the WSA. No mines,
34-8 significant prospects, or mineralized areas were found during our investigation. Copper, molybdenum, lead, zinc, silver, and gold were produced

34-3 The evidence of shafts and adits and the amount and type of material in the dumps associated with the shafts and adits throughout these WSAs indicate mining activity and probable production of gold and silver. The text has been revised to reflect the "probable" nature of production.

34-4 The final EIS has been changed to read as you suggested: "Various types of faults, including detachment faults and quartz veins, comprise a northwest-trending mineral belt that appears to extend from Boulder Dam on the north to the Mohave and McCracken Mountains on the south."

34-5 We believe the mineral potential of Van Deeman, Mockingbird and Mount Davis WSAs warrants higher than moderate classification because of the current mining exploration activity associated with the north-south mineralized trend.

Within this formation the Santa Fe Minerals and Fischer-Watt Gold Company, Inc. have made a significant open-ended discovery at the north end of the Mount Nutt WSA and a lower grade discovery at the south end of the Van Deeman WSA. In between these two discoveries is Mockingbird WSA which now is being explored via a drilling project.

Our classification will be reassessed while writing the wilderness study report in 1989 and adjusted according to information obtained from current exploration.

Mt. Davis WSA has some high, but mostly moderate potential for gold and silver mineral development. The text has been changed to reflect this.

34-6 Information used in the writing of the DEIS considered those areas within the Overthrust Belt as potentially valuable for oil and gas; however, information and directives acquired subsequent to the writing places the potential of these same areas as low to moderate for all WSAs covered under the DEIS. The Final EIS has been changed to reflect this new information.

34-8 from the Wallapai mining district, which lies immediately south of the study area, but there is no record of mineral production from the WSA as stated on page 86. Contrary to the statement (p. 86), none of the deposits in the Wallapai district are known to extend into the study area and, in the part of the Cerbat Range where the study area is located, faults and joints strike northwesterly; "mineralized north/south fault zones" and are not known to extend "through the Mount Tipton WSA". The "recent studies" indicating the existence of "potentially economic mineralization within the boundaries of the WSA" are based on geochemical samples taken by individual prospectors at the north end of the WSA only. The Bureau of Mines does not agree that the study area is valuable for oil and gas based on its proximity to the Overthrust Belt. We agree with Ryder (p. C20) who evaluated the study area as having zero potential for oil and gas based on the presence of igneous and metamorphic rocks.

Grapevine Wash WSA
Grand Wash Cliffs WSA

There are, we believe, several erroneous statements on pages 89 and 93 in the
34-9 DEIS concerning these two WSA's. There are no known mines or prospects in either WSA, as stated in the document (p. 89). The "highly mineralized quartz
34-10 veins" described in the Grand Wash WSA are actually 4 miles south of the WSA, in the Music Mountain mining district. Even if the veins were only 2 miles
34-11 south, as described in the text (p. 93), the northeasterly strike of the veins would preclude them from being present in the Grand Wash Cliffs WSA. We do not agree with the geologic inference that these veins extend into the Grand Wash Cliffs WSA or that there is a high potential for discovery of economic values of mica, copper, and precious metals in the Grapevine WSA. There may be, however, a medium potential for the discovery of occurrences of these minerals in the WSA's. Again, we disagree with the oil and gas rating on page 93. Ryder rates the areas medium for oil and gas potential because the available reservoir rocks are susceptible to flushing by freshwater.

Mount Nutt WSA

In 1987 the Bureau of Mines conducted a field investigation in the Mount Nutt WSA. We believe the minerals and energy resources section (p. 98) of the Mount Nutt WSA contains several inaccuracies. For example, the Oatman mining district, which is adjacent to the WSA, has recorded production of gold and silver, but no recorded production of the minerals from "flat-lying quartz veins," or any other type of deposit, from within the WSA as stated.
Alteration associated with deposits in the Oatman district, and consistent
34-12 with the currently popular detachment fault disseminated gold deposit model, occurs in the study area. We agree that a major mineralized structure extends into the study area at the surface and the WSA probably contains potentially economic locatable minerals; however, no "high grade" zeolite deposits were found in the WSA, although the geologic environment in the WSA is favorable for their occurrence. We do not believe the WSA is potentially valuable for oil and gas as stated on page 99. Ryder considers the WSA to have a low to zero potential for oil and gas, based on the presence of Precambrian cyrstalline rocks and tertiary volcanics.

34-7 As of August 26, 1986, the WSA had 153 active placer and lode mining claims, active exploration operations and physical evidence of past mining and exploration activity.

The final EIS will reflect changes noted in above responses 34-3, 34-4, 34-5 and 34-6.

34-8 The final EIS has been changed to reflect BoM's concerns about record of mineral production, location of the fault zones and potential for oil and gas.

34-9 The final EIS has been changed to reflect BoM's concerns about mines and prospects inside the WSA.

34-10 The final WSA has been rewritten to read "Highly mineralized quartz veins have been mined four miles south of the WSA. The strike of these veins is approximately north 50° west and dips to the northeast. There is no indication the system does not extend into the WSA and geologic inference suggests that it does enter near the southwest boundary and dips northeast under it."

34-11 The statement regarding the high potential for discovery of mica, copper and precious metals is based on comments made by the public on the Grapevine WSA and has been accepted at face value. The BLM geologists have discussed these differences with BoM. The difference of opinion centers on the terms "high" or "moderate" potential as defined by the two agencies.

34-12 The final EIS has been changed to reflect BoM's concerns. For Mt. Nutt and Warm Springs WSAs the statement now reads, "Gold and silver have been produced from near vertical quartz-adularia epithermal veins cutting through in the upper tertiary volcanic units. These units are outside and on the end of the road that is cherrystemmed into the WSA."

The final EIS also shows the oil and gas potential to be at zero. These changes in mineral potential do not cause major changes in reasoning used for determination of the Proposed Action. Therefore, the Proposed Action will not be revised.

Warm Springs WSA

A 1987 field investigation of the Warm Springs WSA found no recorded production of gold and silver within the WSA from flat-lying quartz veins as
34-13 described in the DEIS (p. 105). Indeed, no flat-lying quartz veins were found. Instead, vertical quartz veins, with traces of gold, hosted by Precambrian granite were found in the southern part of the area. The description (p. 105) of a high-grade kaolinite deposit occurring in section
34-14 35, T. 17 N., R. 19 W. is erroneous. Samples taken from the deposit show that the kaolinite content is too low to be considered "high grade" and show only marginal potential for zeolite resources. The industrial grade perlite deposit discussed on the same page is located in section 35, T. 17 N., R. 18 W., rather than section 36. Vitrophyres at other locations in the southern part of the WSA tested for perlite were not industrial grade. Ryder (1983)
34-15 rated the WSA as having a low to zero potential for oil and gas, a rating based on the presence of Precambrian gneiss, granite, and schist and tertiary volcanic rocks underlying the area. This statement is contrary to the DEIS statement appearing on page 105. A warm spring located in section 33, T. 18 N., R. 19 W., was evaluated by Goff (1976) who concluded that the spring does
34-16 not contain water of deep thermal origin, based on concentrations of lithium, boron, and chloride, and temperature of the water. The WSA, therefore, has a low potential as a geothermal resource rather than high as stated.

South Bradshaws East WSA

Several inaccuracies exist in the minerals and energy resources section (p. 111). Although the WSA is near several mining districts, it is not within a
34-17 "historic mining area" as described in the DEIS. We do not agree that remoteness and limited accessibility of the WSA are prohibitive to claim staking. We believe that it should be stressed that minerals mentioned as being mined in the area were mined from the nearby mining districts and not the WSA. The Bureau of Mines agrees with the overall moderate mineral potential.

Sierra Estrella WSA

The minerals and energy resources section (p. 112) in the Sierra Estrella WSA is misleading and ambiguous. The statement that "the mineral potential of the
34-18 area is rated low to high" is ambiguous. The minerals discussed are not commonly associated with each other. Economic concentrations of base and precious metals are not commonly associated with or found within the same geologic environment as iron, muscovite, or titanium deposits. The statement that the tectonic history of the WSA is similar to other high mineral potential areas in central Arizona is too broad and general. It does not state what minerals or what type of occurrences could be expected to be found. We suggest the statements be clarified in subsequent versions of the document. There is no mention of oil and gas resource potential.

Ragged Top WSA

The Bureau of Mines does not agree that 1,500 acres of the Silver Bell mining district extend into the WSA nor do we agree with the term "potentially large deposit" as described on page 116. We believe more appropriate wording would
34-19 be "the area could host occurrences and/or deposits of copper with or without molybdenum, manganese and peripheral lead and zinc, gold and silver."

34-13 See Response 34-12 for the revised statement about quartz veins.

34-14 The final EIS has been changed and the term "high grade" has been removed. Also, "Section 36" has been changed to "Section 35." Thank you for bringing this location error to our attention.

34-15 The final EIS has been changed to read zero to low potential for oil and gas.

34-16 The final EIS has been changed to read: ". . . has a low potential for geothermal . . ."

34-17 The final EIS has been changed to read: "The following minerals have been located and mined near the WSA . . ." and the statement concerning the remoteness and access to the area has been removed.

34-18 The text for Sierra Estrella has been changed to reflect BoM's concerns and corrections.

34-19 Because mining districts do not always have firm, measurable areas or boundaries, BLM changed the text to show that the WSA is near the Silver Bell Mining District. Also, the text now states that the "area could host occurrences and/or deposits of copper with or without molybdenum, manganese, and peripheral lead and zinc, gold and silver."

Haverrocker WSA
The Bureau of Mines agrees with the section on minerals appearing on page 120.

Apache Box WSA
The Bureau of Mines agrees that gold was probably produced from the WSA and that the potential for further discovery of base and precious metal occurrences is moderate.

Bill Hem Cochran

39

United States Department of the Interior

NATIONAL PARK SERVICE
WESTERN REGION
450 GOLDEN GATE AVENUE, BOX 36063
SAN FRANCISCO, CALIFORNIA 94102

IN REPLY REFER TO
L7619 (WR-RP)

December 2, 1987

Memorandum

To: District Manager, Bureau of Land Management, Phoenix, Arizona
Attention: EIS Team Leader

From: Associate Regional Director, Resource Management and Planning, Western Region

Subject: Review of Arizona Mohave Wilderness Draft Environmental Statement (DES - 87/30)

We have reviewed the subject document and have the following comments to offer.

Lake Mead National Recreation Area and Grand Canyon National Park

There are six wilderness study areas that are adjacent to Lake Mead National Recreation Area. These include Van Dyke (no wilderness); Mockingbird (no wilderness); Black Mountains North (partial wilderness); Burro Spring (partial wilderness); Grapevine Wash (no wilderness); and Mount Davis (no wilderness). The Grapevine Wash wilderness study area also lies adjacent to Grand Canyon National Park.

39-1 Although most of these wilderness study areas are adjacent to National Park Service lands classified for resource utilization, we are concerned with the 4,460 acres anticipated to be developed in 13 open pit mines under the proposed alternatives. This would amount to seven square miles of land disturbed in open pit mines adjacent to Lake Mead National Recreation Area. We believe this anticipated development, unless closely controlled, would result in degradation of scenic values of the recreation area and adjacent lands. Because these lands are adjacent to and upstream from the recreation

39-2 area, we also believe that there is potential for environmental impacts from flash floods washing mined materials and chemicals used in the mining process down onto park lands.

39-3 A further concern relates to the off-road vehicle use projected for these lands adjacent to the recreation area. Allowing off-road use is in direct conflict with the management of recreation vehicles on the Lake Mead national Recreation Area. This use on Bureau of Land Management lands increases the

39-1 The 13 mines referred to are projections, or estimates, by the BLM geologist of what will occur. These mines may or may not be developed, but, based on the geologist's best judgments, this is what they expect. Under the mining laws valid claims may be developed. A discussion of valid rights for mining is presented in Chapter 2 under minerals actions.

Should any of these 13 mines become a reality, the BLM would monitor the development and, of course, cooperate at all times with the National Park Service in their management of nearby lands.

39-2 Mining operations must comply with federal and state laws affecting water quality management -- whether or not the area becomes a wilderness. Properly designed waste water pits will protect downstream lands from impacts -- even if flash floods occur.

39-3 The Kingman Resource Area that supervises the public lands near the Lake Mead Recreation Area is beginning a land use management plan to define future policies. This plan will address ORV designation, grazing and other resource uses. Presently, no ORV restrictions are in effect except for those on the WSAs.

BLM will continue to work with contiguous land owners and be a good neighbor. Other land owners and public agency managers will have several opportunities in the next few years to contribute to and comment on the Kingman Resource Management Plan. Your expertise on these matters is welcome and appreciated.

likelihood of illegal off-road use on adjacent recreation area lands. Vehicles on the recreation area only allowed to travel on designated routes and we encourage the Bureau of Land Management to adopt the same policy on lands adjacent to the Lake Mead National Recreation Area.

With respect to the Grapevine Wash study area, Grand Canyon National Park is concerned that grazing and other resource utilization in this area, which is in direct conflict with park management, will increase the likelihood of trespass grazing, illegal off-road use, scenic intrusions and other impacts that would degrade park values.

We propose that all Bureau of Land Management decisions give highest priority to conservation of the natural environment on lands adjacent to National Park Service areas.

Cultural Resources

39-4 It is hard to assess the probable impacts upon cultural resources from either designation or non-designation of wilderness status as so little information is available on the cultural resource base for the studied areas. Little systematic inventory has been conducted. Of the known cultural resources, few have been adequately evaluated to assess their significance. It is difficult to develop and undertake appropriate management practices to assure the protection of even the known resources. Because so little information has been gathered, the drafters of the document have been reduced to predicting the existence of cultural resources based upon a general knowledge of the area. They have predicted that cultural resources are present on all of the studied areas, implying that important cultural resources are probably present and may be affected by designation or non-designation of wilderness in which they are located.

In general, where non-designation as wilderness is proposed, adverse impacts which could occur to cultural resources as a result of either development or motorized access to the area are identified. Both activities tend to bring people into proximity with the resources with resulting vandalism or construction related impacts. Where wilderness designation is proposed, cultural resources are seen to be benefited overall through restricted and on-foot access to their locations (and the related lessening of the chance for vandalism or mining or other development related impacts). This being the case, designation as wilderness should afford some measure of protection to both known and undiscovered cultural resources in all of the areas under consideration.

Based on the above comments, we have the following recommendations:

39-5 1. Although no archeological survey has been undertaken at South Bradshaws East and Ragged Top, cultural resources which may be present would benefit from wilderness designation. We recommend, therefore, that the proposed No Wilderness Alternative be reconsidered as there appear to be no overriding reasons for non-designation and undiscovered cultural resources would be benefitted.

39-4 BLM would like to inventory all cultural resources, but its budget will not support such inventories in the foreseeable future.

However, before authorizing surface-disturbing activities, site-specific cultural resource inventories are performed and mitigation measures determined. When cultural values are found, mitigation measures would be proposed to preserve scientific information and other cultural values.

BLM will continue to communicate and cooperate with the National Park Service.

39-5 Not all areas that contain cultural resources meet the criteria (stated in the Wilderness Act) for wilderness designation. Resource management plans being developed for the Kingman and Phoenix Resource Areas will have protective measures and in some cases special management areas for significant cultural resource sites. Also, see 39-4.

All the WSAs that probably have cultural sites would benefit from wilderness designation, but the BLM must consider multiple uses for the land. The No Wilderness recommendations for South Bradshaw East, Ragged Top, Van Deeman, Mockingbird, Mt. Davis and Grand Wash Cliffs were considered carefully and could not be changed for possible cultural sites. Even in the case of Grand Wash Cliffs, Apache Box and Hoverrocker, where known cultural resources may qualify for NHR status, we believe these sites can be protected by management actions other than wilderness designation.

BLM would like to inventory the WSA; however, our budget has not allowed for systematic inventories even if known cultural resources are present.

2. By the same reasoning, Van Deeman, Mockingbird, Mount Davis and Grand Wash Cliff areas (all proposed No Wilderness Alternative) which are predicted to contain cultural resources should be inventoried at a sample level. Upon acquiring reliable information with regard to the presence and significance of cultural resources in the areas, the No Wilderness Alternative should be reconsidered as appropriate.

3. In the Grapevine, Apache Box and Hoverrock areas, where known cultural resources which probably qualify for inclusion in the National Register of Historic Places are present, we recommend that the No Wilderness Alternative be reconsidered in view of the possible impacts which could occur to these sites as a result of non-designation.

39-5 4. We recommend that the known cultural resources in the Mount Tipton, Warm Springs, Mount Nutt and Sierra Estrella areas be evaluated for significance and, if appropriate, nominated to the National Register of Historic Places. If these known sites are found to be eligible, or are placed on the National Register, management plans to secure their protection should be prepared and undertaken, consistent with the proposed Wilderness designation.

5. We further recommend that some form of systematic inventory for cultural resources be undertaken to assure that sufficient information exists to support appropriate and responsible cultural resource management decisions.

We appreciate the opportunity to comment on the Mohave Wilderness Draft Environmental Statement.

Roy Murray

cc:
Superintendent, Lake Mead National Recreation Area
Superintendent, Grand Canyon National Park
WASO 762
IAS, Western Region
Pat Port, Office of Environmental Project Review

December 7, 1987

Wayne Ranney
8238 W. Aspen #5
Flagstaff, Arizona 86001

Henri Bisson, District Manager
Bureau of Land Management, Phoenix Office
2015 W. Deer Valley Rd.
Phoenix, Arizona 85027

Dear District Manager:

Thank you for the opportunity to respond to the Draft EIS of the Arizona Mohave Wilderness Areas. I am generally pleased that you are prepared to recommend that over 73% of the WSA acreage be included as wilderness. I am especially pleased that most of this acreage is within the largest WSA's as I believe that one large wilderness area is better than five small ones of the same acreage. I wish to commend you on your decisions to include 18,400 acres in the Black Mountains North WSA, 23,000 acres in the Burns Spring WSA, 28,170 acres in the Mt Tipton WSA, 27,210 acres in the Mt. Nutt WSA, 90,600 in the Warm Springs WSA, and 18,830 acres in the Sierra Estrella WSA. I would hope that you do not construe my pleasure with your decision as a reason to decrease this acreage in the final EIS. This amount of land for wilderness seems fair to all involved parties.

My only disappointment is that "cherry stems" continue to be included in wilderness areas. It seems that in some instances, these could be deleted to further enhance wilderness characteristics. By allowing cherry stems into wilderness areas, you are cultivating an environment that will lead to management problems in the future. How will motorized traffic be kept out of wilderness at the end of cherry stems? Do you plan to fence the entire cherry stem? Or do you think that signing will do the trick? Cherry stemming will create enforcement problems in the future. Please take this into consideration when thinking about how your future managers will deal with cherry stems.

I want to encourage you to be firm in your final analysis for including the maximum amount of wilderness acreage to Congress. At this time in our states' history, it may seem that there is plenty of wild country for our citizens and that wilderness designation is a poor idea. But as time passes, these jewels of our public lands will continue to inspire our people and relieve the stresses of a modern world. Ask anyone how much of their total resources the save for the future and most will tell you at least 10%. The wilderness recommendations that you propose do not even approach that amount so please do not reduce this acreage. We need to save for our future with wild land as well.

Thank you and good luck.

Wayne Ranney

Wayne Ranney

41

Cyprus Metals Company
An Affiliate of Cyprus Minerals Company

7700 South Alton Way
Post Office Box 3799
Englewood, Colorado 80155
303-740-5000

December 11, 1987

EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

Re: Comments on Arizona Mohave Wilderness Study Areas

Dear Sir or Madam:

As a mining company with several thousand employees in this country, we often depend on access to public land for exploration and production of minerals. For this reason we feel affected by the proposed wilderness study area withdrawals in the Mohave WSA draft EIS.

While acknowledging that some specific areas deserve and require careful management and protection for aesthetic, ecologic, or recreational values, blanket withdrawals from mineral entry may not be necessary.

There are already multiple requirements for environmental protection, regulation, restoration, mitigation and resource assessment before mining in any area. Recent levels of such regulation do a fair job of avoiding resource abuse or offsite impacts. The non-renewable nature of mineral extraction can allow for short term production followed by reclamation and then return of an area to a non-industrial post-mining land-use.

There can be some compatibility between needs for mineral extraction and the long term needs for wilderness devoid of industrial activity. We would propose that limited, regulated mineral entry be allowed in the areas below, even if they are given partial wilderness status. If mineral entry would otherwise be prevented, then we must recommend that these areas of potentially significant social, economic and mineral values be declared open for multiple use.

The comments below are from one of the more experienced exploration geologists in the Southwestern United States:

"I believe some comment should be made regarding three proposed wilderness areas that have received partial wilderness status recommendations. They are Black Mountains North (2-09), Burns Spring (2-10) and Mount Nutt (2-24).

In the cases of Black Mountains North and Burns Spring, there are active gold mining operations directly adjacent to the proposed boundaries, and at Burns Spring, the southern quarter of the WSA contains numerous prospects and gold shows.

The Mount Nutt WSA includes a large area of post-mineral volcanic rocks that could likely be covering areas of gold mineralization similar to that found nearby at Oatman. The post-mineral rocks hide any potential ore bodies but an examination of the geologic map shows that mines and prospects are found right up to the edge of the post-mineral cover. There are also numerous gold shows in the north end of the WSA between Secret Pass and the northern boundary. I have taken several anomalous samples and observed favorable alteration in this area myself".

Your consideration of these comments is appreciated.

Sincerely yours,

J. A. Sturgess
Manager
Environmental Affairs

R. Hagman
M.D. Martin
J. Matlock

CYPRUS

-2-

42

5122 East Adams Street
Tucson, Arizona 85712
December 14, 1987

E.I.S. Team Leader B.L.M.
2015 West Deer Valley Road
Phoenix, Arizona 85027

Dear Sir:

We're glad we're able to agree on one proposal in your E.I.S. for the Arizona Mohave - the All-Wilderness for Sierra Estrella. Otherwise, there is just nowhere near enough Wilderness set aside.

Mockingbird should be all wilderness to protect as much as possible the habitat of bighorn sheep, Gila monster and desert tortoise.

Burro Spring should be all wilderness to protect bighorn, peregrine falcon, desert tortoise and Gila monster habitat from future disturbance from mining activities.

Mount Tipton: if 76% of the U.S.A. is preserved as wilderness, we can agree with that proposal.

Grapevine Wash: all wilderness because the area provides natural wilderness values, solitude and primitive recreational opportunities.

Grand Wash Cliffs - should be all wilderness to protect bighorn and Gila Monster habitat and provide wilderness solitude for natural recreation.

Mount Davis - all wilderness to protect the habitat of bighorn, tortoise and Gila monster from disturbance. And preserve opportunities for primitive solitude.

Mount Nutt - all wilderness to prevent future mineral exploration projects which would impact on bighorn habitat.

Page ② - Pelich

Warm Springs - all wilderness to protect the natural solitude and primitive recreational values of at least 93.3% of the 114,800 acres of this relatively large area.

South Bradshaws East - all wilderness to preserve opportunities for solitude in an area adjacent to a Prescott National Forest Wilderness. This is an opportunity that should be taken advantage of. Also a potential National Register site would be protected.

Rugged Top - all Wilderness to preserve as much as possible the opportunity for natural activities in this unique area. The wildlife and cultural values would benefit from elimination of vehicles and development.

Apache Box - all wilderness in order to protect the cultural resources and primitive recreation opportunities from being degraded due to possible future exploration for minerals, which probably aren't even present.

Hoverrocker - all wilderness to preserve the naturalness, solitude and primitive recreation now possible in the area.

Sincerely,
Walter + Dorothy Pelich

43

ARIZONA DEPARTMENT OF COMMERCE

EVAN MECHAM
GOVERNOR

STATE CAPITOL
1700 WEST WASHINGTON
PHOENIX, ARIZONA 85007
(602) 255-5371

THOMAS P. CALDWELL
DIRECTOR

MEMORANDUM

TO : Bureau of Land Management

FROM: Arizona State Clearinghouse

DATE: December 11, 1987

RE : Arizona Mohave
Draft Wilderness Environmental Impact Statement
SAI NO: AZ 87-80-0049

This memorandum is in response to the above project submitted to the Arizona State Clearinghouse for review.

The project has been reviewed pursuant to the Executive Order 12372 by certain Arizona State officials and Regional Councils of Government.

The comments are attached along with any other documents submitted with the project.

The project is supported as written.

Attachments

cc: Arizona State Clearinghouse
Applicant

RECEIVED
ELG, PHOENIX DIST. OFF.
PHOENIX, ARIZONA
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44

Santa Fe Pacific Railroad Company

6200 Uptown Blvd. NE, Suite 400
Box 27019
Albuquerque, New Mexico 87125
505/881-3050

December 8, 1987

Mr. Henri Bisson, District Manager
U. S. Bureau of Land Management
2015 West Deer Valley Road
Phoenix, Arizona 85027

Dear Mr. Bisson:

This letter is in response to your request for comments on the Arizona Mohave Draft Wilderness Environmental Impact Statement (EIS). This letter will augment our comments which were submitted to the public hearing in Phoenix, Arizona on December 2, 1987, and which are attached to this letter. Also included in this letter are specific comments containing details regarding the high mineral potential exhibited in two of the WSA's (Burns Spring and Black Mountains North) in which Santa Fe Pacific owns some 20,300 acres of reserved mineral interests, and which describe the mineral potential in the Mt. Nutt and Warm Springs WSA's in which Santa Fe Pacific owns over 20,300 acres of reserved mineral interests. The Company also owns some 6,900 acres of reserved mineral interests in the Grand Wash Cliffs and Mt. Tipton WSA's, but no description of the mineral potential of these units is included herein. We generally concur in the treatment of the mineral potential of these WSA's as described in the Draft EIS.

The enclosures contain a summary of the mineral potential of each of the four WSA's, as well as summaries for specific mines and mineral prospects within each WSA. This information was developed as a result of field work by our staff and by geologists under contract to our affiliate, Santa Fe Pacific Mining, Inc., and included extensive literature searches and detailed interpretation of computer-processed Landsat images. Each of these WSA's has been the scene of historic mineral exploration and extraction for the past century. Our review of the geologic facts concerning the mineral potential of these WSA's indicates that there is a medium to high potential for economic mineral deposits in each. The particularly high economic potential coupled with the presence of our extensive reserved mineral interests leads us to conclude that the Black Mountains North and Burns Spring WSA's must not be recommended for further wilderness study, and should be returned to multiple use as soon as possible.

Also enclosed is a map showing the mineral potential on our Company's lands on a county-wide basis. This map was developed using the same methodology as that described above. We trust that you and your staff will be

A Santa Fe Southern Pacific Company

Mr. Henri Bisson
December 8, 1987
Page -2-

able to use it in a constructive fashion. As you can see, this map indicates that there is extensive acreage of medium to high mineral potential on our Company's lands within and adjoining the Grapevine Wash WSA. Because of the mineral potential in this region, we do not believe it would be in the public interest to expand this WSA. We support BLM's proposed action for this WSA, which is a recommendation for no wilderness.

Best regards,

George B. Byers
Director-Public Affairs

GGB:gem
Enclosures

cc: F. J. Jenkins - w/o encl
J. H. Jackson " "
D. V. Cole " "
R. Kern " "
G. M. Pensabene " "
J. C. Muys " "

45

Dear EIS Team Leader.

I am writing to you in regards to the Arizona Mohave DEIS.

After reviewing the Environmental Impact Statement, I would just like to report that I feel that all 15 WSAs are suitable for inclusion into the NWPS.

While I realize only Congress can designate an area as wilderness, I feel that the BLM should consider the preservation of all 274,464 Acres in the 15 WSAs.

It seems to me that with the way this state is growing so enormously fast, we must protect as much of the potentially exclusive wilderness areas that we possible can.

I hope you will reconsider and add the many areas previously left out in this DEIS.

Thank you

Sincerely,

John Pompi

47

ARIZONA DESERT BIGHORN SHEEP SOCIETY, INC.

P.O. Box 5241 • Phoenix, Arizona 85010

December 29, 1987

RECEIVED
BLM, PHOENIX DIST. OFF.
PHOENIX, ARIZONA
JAN 6 1988
AM PM
7 8 9 10 11 12 1 2 3 4 5 6

Mr. Bill Carter
EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, AZ 85027

RE: ARIZONA HUALAPAI DRAFT WILDERNESS ENVIRONMENTAL IMPACTS STATEMENT

Dear Mr. Carter:

Please accept the following comments of the Arizona Desert Bighorn Sheep Society, Inc. (ADBSS) as part of the official public record for review of the above reference document. Of the fifteen wilderness study areas (WSA) analyzed in this document, fourteen occur in Arizona. Of those, ten are desert bighorn sheep habitat and four are not.

199

The ADBSS is concerned about the impact wilderness designation will have on two of our primary programs, and a third in which we take great interest. The primary programs are waterhole construction and maintenance, and desert bighorn capture and transplants. The third area of interest is the ability of bighorn sheep hunters to access and hunt these WSAs.

As written, the Wildlife Management Actions concern us due to statements about motorized vehicle use and helicopter flyovers. We suggest these actions be amended to properly reflect the wildlife related activities which take place in the WSAs containing desert bighorn and bighorn habitat.

47-1 The customary uses of motorized vehicles are suggested to be assessing wildlife habitat improvement projects for design, monitoring, and maintenance, as well as conducting inventories and monitoring of threatened and endangered species. The glaring omission is the use of motorized vehicles in the actual construction of wildlife habitat improvement projects. ADBSS strongly urges the addition of construction as a customary use. This is a historic use as it began long before BLM's wilderness inventory commenced, and has continued even after designation of WSAs. ADBSS has refined its construction techniques through the years. With the completion of 92 desert bighorn sheep water projects, we have come to appreciate and rely upon the use of motorized equipment and vehicles in their construction and maintenance. The use of these tools enables the construction of high quality, low maintenance waterholes.

47-2 Helicopter flyovers of wildlife projects are listed by frequency of flights for either inspection or maintenance. The one event which is not accounted for in the schedule is emergency repairs. Consideration must be given to allowances for helicopter use in this type of situation. Although ADBSS prides itself in the quality of its projects, emergencies do arise which require immediate attention. Flexibility is the key to management planning. This feature should be incorporated into this management action for the vehicular delivery of repair materials and helicopter flyovers as well.

WRITTEN COMMENTS AND RESPONSES

47-1 On page 9, column 2, the draft EIS states that motorized vehicle use for maintenance, monitoring and design of wildlife waters would be allowed, but subject to the "minimum tool" policy. This would also apply to construction of new waters if they meet the non-impairment criteria identified in the Wilderness Management Policy.

47-2 The use of motorized vehicles in emergency situations will be addressed in the wilderness management plan for each WSA.

Mr. Bill Carter
December 29, 1987
Page Two

47-3 Use of motorized vehicles and helicopters can affect Arizona's successful desert bighorn sheep capture and transplant program. Our two primary means of capturing bighorn are net drops on baited animals and net guns fired from a helicopter. Two WSA's are identified as potential bighorn sheep areas: Black Mountains North and Warm Springs. Transplants do not occur every year, but when they do, it is important to have the capability of using both motorized vehicles and helicopters in this effort. AZGFSS strongly recommends the wildlife management actions be amended to include the use of these tools for capture and transplant purposes as needed.

47-4 AZGFSS also has a concern about the ability of bighorn sheep hunters to access the proposed WSAs for the purpose of hunting bighorn sheep. The six WSAs containing bighorn which are recommended for partial or all wilderness are large areas of steep, very rugged terrain. Sierra Estrella at 23 sections (14,830 acres) is the smallest. Warm Springs at 142 sections (90,500 acres) is the largest. The average size of a bighorn sheep WSA is 53 sections, or 33,707 acres. With expanses this large it is important to have vehicle ways within the WSAs available for use by hunters.

The AZGFSS feels the BLM's proposed action for the no wilderness WSAs is reasonable. We are concerned about the six WSAs which contain bighorn and crucial bighorn habitat recommended for partial and all wilderness. In those areas, the WSA boundaries should be redefined according to the boundaries of the crucial desert bighorn habitat. Vehicle ways should be cherrystemmed to be made available for hunters.

47-5

Thank you for the opportunity to comment on this document.

Sincerely,

Stephen M. Williams

Stephen M. Williams, Chairman
Legislative Committee

SMWimx

47-3 The wilderness management plan will address the issue of access for sheep capture. This will be subject to the "minimum tool" policy and will require approval by the "authorized officer." However, prior practices such as sheep captured at specific sites should be listed in legislation if that is the intent of Congress.

47-4 No motorized use by the public is allowed within wilderness established by Congress unless specified in the wilderness designating document.

47-5 Wilderness boundaries are based on land status and on impacts such as existing roads, mines and powerlines, etc. Wildlife habitat boundaries are not used as part of the criteria for establishing WSA boundaries.

RECEIVED
BLM, PHOENIX DIST. OFF.
PHOENIX, ARIZONA
JAN 04 1988

48

Dennis Coules
4684 Lambert Rd.
El Sobrante, CA 94803
Dec. 31, 1987

EIS Team Leader, BLM
Phoenix District Office
2015 W. Deer Valley Rd.
Phoenix, AZ 85027

RE: Arizona Mohave Draft EIS

Dear Team Leader:

These comments address the draft Arizona Mohave Wilderness EIS. I am personally familiar with the region and several of the areas because I have made several trips to Arizona over the past several years specifically to visit the WSAs in question as well as those of the Yuma District.

To start out with, I strongly urge that all of the WSAs under consideration be recommended for Wilderness designation in their entirety, and that each be further enhanced in acreage by including adjacent roadless lands that were excluded in previous phases of the wilderness inventory and evaluation. Roads should be closed and intrusions should be eliminated or rehabilitated.

In particular, those areas that are proposed as non-wilderness--Van Deenan, Mockingbird, Grapevine Wash, Grand Wash Cliffs, Mount Davis, South Beaklows East, Ragged Top, Apache Box, and Hoverracker, should be reinstated and wherever possible enhanced by combining with adjacent public lands to increase their size and suitability. Areas that are proposed for partial wilderness--Black Mountains North, Burro Spring, Mount Tipton, Mount Nutt, and Warm Springs, should be recommended in their entirety at a minimum and also increased in size wherever other public lands are adjacent that could be added by closing minor dirt roads, etc.

I believe that the overriding consideration in determining whether an individual WSA be recommended for wilderness designation is if such designation would enhance the long-term maintenance of native wildlife and plant communities and natural ecological processes in the region. Designation of roadless areas as Wilderness is currently the most effective tool available to the BLM to assure that short-term natural resource exploitation will not utterly destroy the long-term productive capacity of the lands under your jurisdiction.

I therefore highly recommend that you utilize this tool of Wilderness designation to its fullest extent by recommending that ALL WSAs under consideration in this EIS be designated as Wilderness by Congress in addition to all adjoining roadless lands that were whittled away during the WSA process and other roadless parcels that were evaluated but rejected for WSA status during the evaluation process. Wilderness designation, which still permits a wide variety of multiple uses, should be the MINIMUM MANAGEMENT STANDARD FOR BLM LANDS THAT REMAIN ROADLESS AND LARGELY UNDEVELOPED.

A wide diversity of plant and animal species inhabit the desert lands that are administered by the BLM and are under consideration in this EIS. Wilderness designation of ALL 15 areas comprising 276,500 acres as well as substantial adjoining acreage should be the minimum protective recommendation made by BLM to Congress in the final document, as a step to insure that millions of years of evolution and adaptation will not be wasted by a few years of BLM mismanagement. Thank you.

Sincerely,

Dennis Coules

49

The Yuma Valley Rod & Gun Club, Inc.

ARIZONA STATE OFFICE
BUREAU OF LAND MGMT

ORGANIZED 1936 — INCORPORATED 1936

DEC 24 '87

BLT/DATE

P. O. BOX 1808 ■ YUMA, ARIZONA 85364

SD/MD
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RESOURCES
MINERALS
OPERATIONS
ADMIN
CENT FILES
DIST CHRN
DIST MGRS
ACTION

Congressman Morris K. Udall
Committee Chairman Interior & Insular Affairs
Washington, D.C. 20510
Attn: Mark Trantwein

Dear Mark,

As per our visit on December 4th, I would like to personally thank you for giving us the opportunity to meet with you. I would like to say that it is not everyday when the general public gets to visit with the staff from our congressional delegation.

I would hope that you see our concerns towards wilderness in Arizona. We have serious doubt whether our type of proposal language can be written into the bill. At this time, it needs to be known that if language such as ours can not be written in the bill, you can be assured that it will be very difficult for us to lend our support.

To say that it will be difficult to prepare language that would include necessary wildlife management options and include necessary vehicular ways for public access is understandable. But to say that we cannot, just because it would not be acceptable by legislators because it does not agree with their concept of wilderness is <u>not</u> understandable.

Whether it be a USFWS proposal or a BLM proposal, it is most important to remember that the responsibility of managing wildlife should <u>not</u> be hampered by wilderness. It is very hard for our organization to understand how an area that is currently being managed for wildlife using modern management techniques and using available distinct vehicular ways (roads) will just disappear because of the designation of wilderness.

Specifically concerning BLM proposals we see even more concerns towards the designation of wilderness. One of our first concerns is we understand that the management plans for the Management of Wildlife by the Arizona Game and Fish Department in a classified area will not be written until <u>after</u> the area has been designated. This is complete hogwash. How can you expect anyone to agree to anything when they don't know what their going to be able to do or not to do until after the fact.

Secondly, we understand that even if BLM has a designated wilderness area approved by Congress there are grandfathered rights that will give ranchers and miners the right to use mechanized equipment to manage their responsibilities as long as the State Directors approves.

We as everyday citizens regardless of what the Director of BLM says, will not be able to use the very same vehicular ways by vehicle that a rancher or miner might use. Bottom line here is we have no problem with the rancher and/or the miner using vehicles for access to manage their investments so long as us as the Sportsmen of Arizona can do the same

At this time, again I would like to thank you, as well as Mr. Mike Spear for giving us the opportunity to voice our views. We would hope that we can meet again before rough draft begins in order to give your committee some insight to the CONS as well as the PROS to Wilderness Designation in Arizona.

Sincerely,

Joe Fugate

Joe Fugate
Legislative Committee Chairman
The Yuma Valley Rod and Gun Club, Inc.

EVAN MECHAM, Governor

COMMISSION
JOHN R. WARR, Eagle, Chairman
HERB D. ADAMS, Bullhead City
FRANCES W. WERNER, Tucson
THOMAS E. WOODS, JR., Phoenix
PHILLIP M. ASHCROFT, Eagle

Director
TEMPLE A. REYNOLDS

Assistant Director
DUANE L. SHROUFE

50

ARIZONA GAME & FISH DEPARTMENT

2222 West Greenway Road Phoenix, Arizona 85023 942-3000

December 17, 1987

Mr. Henri R. Bisson, District Manager
Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

RECEIVED
B.L.M. AZ STATE OFFICE
DEC 21 1987
7:45 A.M.
PHOENIX, ARIZONA

Attn: EIS Team Leader

Dear Mr. Bisson:

Re: Arizona Mohave Wilderness
Draft Environmental Impact Statement

The Arizona Game and Fish Department has reviewed the draft environmental impact statement (DEIS) that addresses wilderness potential for 14 wilderness study areas (WSAs) in Arizona, and we respectfully submit the following comments.

Overall, the Department believes that the DEIS adequately and accurately presents the issues involved with and the environmental consequences of proposed wilderness designation in the subject WSAs.

Of particular interest to the Department are items involving future wildlife management. The wording of the text, and basic assumptions regarding allowable wildlife management practices, satisfy our concerns over wilderness designation. According to the text, maintenance of existing developments, construction of new developments, and big game surveys via aircraft will continue to be valid activities within wilderness areas, provided minimum guidelines and nonimpairment criteria are followed.

50-1 We do, however, have two general concerns with the way the document has addressed wildlife-related issues. First, only two access routes to wildlife developments are cherry-stemmed to allow the continued use of vehicles to access the sites for maintenance purposes. The Yuma District's Wilderness DEIS went to great lengths to cherry-stem washes and roads to allow the continued use of vehicles to wildlife developments. We would have preferred a similar effort in this DEIS. Secondly, the DEIS describes a very grim picture for wildlife, as the result of mining activities, regardless of wilderness designation. Apparently, a significant number of valid claims exist which would allow considerable mining within designated wilderness areas.

An Equal Opportunity Agency

50-1 Wilderness management plans will be written after, and if, designation as wilderness is determined by Congress. Access for design, construction, monitoring, and maintenance of wildlife developments, inventories or studies, will be treated under the "minimum tool" policy and will require approval by the "authorized officer." BLM has and will continue to cooperate with the Arizona Game and Fish Department in all wildlife matters.

The following table provides information on acres of bighorn sheep habitat that will be impacted by mining activities under various management alternatives, which was gleaned from both the Environmental Consequences chapter and Table 2-6 (Summary of Impacts). It should be noted that the figures presented in Table 50-2 2-6 and the Environmental Consequences chapter, for corresponding WSAs, do not necessarily jibe (e.g. Mount Nutt WSA).

Table. Acres of Bighorn Sheep Habitat Impacted by Mining

WSA	Alternative		
	All Wilderness	Partial Wilderness	No. Wilderness
Van Deeman	905	N/A	1510
Mockingbird	624	N/A	300
Black Mtns. North	705	585	917
Burns Spring	600	1210	600
Grapevine Wash	0	N/A	302
Mt. Davis	300	N/A	300
Mt. Nutt	758	756	1063
Warm Springs	957	9415	1557
Sierra Estrella	1500	N/A	3500
Ragged Top	0	N/A	600

As previously stated, despite wilderness designation, significant impact to wildlife will result because of existing valid mineral claims. Therefore, in this case wilderness designation does not afford its "usual" protection from mining activities. The objectionable feature of the DEIS is the tone regarding the unavoidable losses, citing the total destruction of "x" number of acres and the loss of "y" number of bighorn sheep as a result of mineral development. The draft document implies the attitude 50-3 that wilderness designation is the one and only hope to protect wildlife habitat from mining, and if not designated, an area is simply "doomed". Nowhere does the draft document address the benefits of mitigation/compensation measures to off-set these impending losses.

Therefore, the Department strongly recommends that the BLM develop and implement specific criteria/guidelines that would 50-4 protect desert bighorn sheep resources from adverse impacts from mining activities, and at the very least, provide for full compensation for any losses suffered. These guidelines could be part of a standards and guidelines package to emphasize special status species (e.g. desert bighorn sheep) within a designated Resource Conservation Area.

50-2 Discrepancies in figures between text and Summary Impact have been corrected in this FEIS.

50-3 BLM has various ways to preserve land and resources. Specific guidelines and stipulations are worked out for each mine application, depending on the circumstances of each application. The Arizona Game and Fish, along with other state and federal agencies, are consulted and mitigation measures are determined on a case-by-case basis. Mitigation/compensation is mandatory for operations disturbing five acres or more. Mining operations on all public land but WSAs work under the BLM 3809 regulations. The 3802 regulations control work on WSAs. Also, all mining operations must comply with the Threatened and Endangered Species Act.

50-4 This is beyond the scope of the EIS. Specific criteria/guidelines would be addressed in a habitat management plan (HMP) and in the case of wilderness designation, in the HMP and the wilderness management plan. The Arizona Game and Fish Department is a co-developer for all HMPs developed for lands managed by BLM in Arizona.

The following comments are provided by specific WSA.

Van Deeman - If the area is designated as wilderness, we recommend that the wash leading to the Van Deeman Tank Wildlife Development be cherry-stemmed, to allow continued vehicle access for maintenance purposes.

Mockingbird - If the area is designated as wilderness, we recommend that a route leading to the proposed Fire Mountain Catchment be cherry-stemmed, to allow vehicle access for the development and maintenance of this water.

Black Mountains North - The DEIS mentions that the Lost Cabin Spring area may be used as a future bighorn sheep capture site. As yet, it is unknown whether or not a drop net operation would be successful in this area. In the past, sheep were captured in this area with a dart gun and helicopter. Future capture operations may also require the use of a helicopter and dart/net gun technique. Should this be the case, we would apply to the district manager for a ruling on nonimpairment criteria.

Burns Spring - The Department would prefer that the vehicle access routes to Chalk Spring, Calles Spring, and Lost Cabin Catchment be cherry-stemmed, to facilitate maintenance efforts. Additionally, within this WSA, it may be desirable to attempt
50-5 sheep capture efforts similar to those described within the Black Mountains North comments.

Mt. Tipton - The Department does not view the irregular boundary
50-6 in the southwest portion of the WSA to be adequate justification for dropping this 5,890-acre appendage from further wilderness consideration. This appendage includes primarily public land (including minerals) and affords some good wildlife values. Additionally, we recommend that the vehicle access to Lower Indian Springs be cherry-stemmed, to allow access by development vehicles.

Grapevine Wash - No additional comments.

Grand Wash Cliffs - If the area is designated as wilderness, we recommend that the vehicle access routes to the existing Music Mountains Catchment No. 8 and the proposed Slickrock Catchment be cherry-stemmed, to facilitate maintenance and development of these important water sources.

Mount Davis - If the area is designated as wilderness, we recommend that the vehicle access route to the Mt. Davis Catchment be cherry-stemmed, to allow access by maintenance vehicles.

50-5 The sheep capture efforts for the Burns Spring and Mount Nutt WSAs will be addressed, if the areas are designated, in the wilderness management plan for the two areas. BLM is recommending cherrystemmed access to be provided to Caliche, Antelope and Alkali Springs to permit administrative and hunter/recreationist access. The Arizona Mohave FEIS has been changed to reflect those recommendations in the Proposed Action alternative for the Warm Springs WSA.

50-6 The 5,890-acre area in the southwest portion of the Mt. Tipton WSA was dropped primarily because of its low primitive recreation and solitude values. To clarify this, the FEIS has been rewritten as follows: "The Proposed Action/Partial Wilderness for the Mount Tipton WSA would designate 28,170 acres as wilderness and return 5,890 acres to other resource uses. Boundary adjustments would eliminate an irregularly shaped southwest appendage of WSA land which has lower wilderness values and is isolated from the much more scenic main mass of the area. This eliminated area would be difficult to manage and also contains some high mineral potential areas and a projected mine."

Mount Nutt - The Department recommends that the vehicle access routes to the existing developments at Upper Twin Spring, Trough Spring, Ram Spring, and Slurry Tank, and to the proposed developments at Cottonwood Tanks and Cave Springs be cherry-stemmed, to facilitate the development and maintenance of these important wildlife waters. Sheep capture efforts similar to
50-5 those described in the comments for the Black Mountains North WSA may be desirable within this WSA.

Warm Springs - In addition to the proposed cherry-stemmed roadways accessing Warm Springs, Caliche Springs, and Antelope/Alkali Springs, we recommend cherry-stems for Sheep Springs, McHeffy Spring, Columbine Spring, and Metate Spring, as well as the access routes to the proposed developments at Unnamed Spring and Cool Spring. Sheep capture efforts similar to those
50-5 described in the comments for the Black Mountains North WSA may also be desirable within this WSA.

South Bradshaws East - No additional comments.

Sierra Estrella - No additional comments.

Ragged Top - It is the Department's understanding that the Phoenix District will designate the Silverbell and West Silverbell Mountains, including Ragged Top, a Resource
50-7 Conservation Area (RCA). This RCA will emphasize wildlife values, particularly desert bighorn sheep and desert tortoise. Therefore, we do not anticipate any significant change in management emphasis for the area with either All Wilderness or No Wilderness.

Hoverrocker - No additional comments.

In conclusion, several comments are provided by specific reference to a portion of the text of the DEIS.

Page 3, Column 2, Paragraph 5

Burro capture efforts in July and August, although compatible with recreational use, may be in conflict with mule deer fawning. This would be most significant in the Mount Tipton and Grand Wash Cliffs WSAs. Burro capture efforts within these two WSAs would be more appropriate in September of October.

Page 9, Column 2, Paragraph 1

In addition to special status species, wildlife research and
50-8 management efforts for non-listed species should be included as valid pursuits within wilderness areas.

50-7 The Resource Conservation area (RCA) referred to is proposed in the Phoenix Draft Resource Management Plan/Environmental Impact Statement issued in December 1987. The decision about this proposed RCA is not final, but the proposed RMP/final EIS will be published in 1988.

50-8 After designation, BLM will write wilderness management plans for each wilderness. These plans will determine the everyday details of management, including modes of travel to meet wildlife needs. The 'minimum tool' concept will be applied to any proposed developments and maintenance. BLM manages the public land for protection of all wildlife, including special-status species -- and wilderness designation will not change this direction.

Page 9, Column 2, Paragraph 4

50-9 The Department would prefer that this paragraph read, "Helicopter flyover of the wildlife projects would be used on the average of one day every year to determine maintenance needs. A helicopter would land near the site as necessary to effect repairs. It is anticipated that this would occur on the average of once every two years." We believe it is an undesirable and unnecessary restriction to limit helicopter landings to once every two years for maintenance purposes.

Page 19, Column 2, Paragraph 2

It is our understanding that the Lake Mead National Recreation Area considers Tyro Wash as an unauthorized vehicle route within the Recreation Area. Therefore, providing vehicle access through this WSA to Lake Mohave for the benefit of recreationists is probably moot.

Page 22, Column 1, Paragraph 3

50-10 According to Map 2-4 (on the facing page), the proposed road in Section 32 already exists.

The Department appreciates the opportunity to review this DEIS, and hopes that our comments are useful in finalizing the final document.

Sincerely,

Temple A. Reynolds
Director

TAR:RKW:lkl

cc: Arizona State Clearinghouse, AZ 87-80-0049
Wes Martin, Supervisor, Kingman Regional Office
Don Wingfield, Supervisor, Yuma Regional Office
Tom Spalding, Supervisor, Tucson Regional Office
Don Turner, Supervisor, Mesa Regional Office
Beau McClure, Deputy State Director, BLM State Office

50-9 The FEIS has been changed per your suggestion: "Helicopter flyover of the wildlife projects would be used on the average of one day every year to determine maintenance needs. A helicopter would land near the site as necessary to effect repairs—which is expected to average once every two years. Equipment to repair the project would be taken in by helicopter or vehicle on the average of once every two years."

50-10 The map on page 23 shows a vehicle way in section 32, not a road. The owner of the north half of section 33 has requested a road right-of-way through section 32. The text in the FEIS has been rewritten to explain this.

51

Arizona Wilderness Coalition

December 22, 1987

ARIZONA STATE OFFICE
BUREAU OF LAND MGMT

DEC 29 '87

BRL/ASE
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ADMIN
CONT PERS
TRNG CNTR
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ACTION: [illegible]

Dean Bibles, State Director
BLM
3707 N. 7th St.
Phoenix, AZ 85014

Dear Dean,

51-1 Please accept the Arizona Wilderness Coalition's proposal, Arizona Wilderness, as public comment on the BLM's recent draft Yuma and Arizona Mohave wilderness environmental statements. We have provided a copy of our proposal to each of the wilderness coordinators and to your office by now. If we need to do more to make this officially a part of the record where that is still possible, please let me know.

Thank you for the opportunity to comment in this way. We look forward to working with you and the rest of the Arizona BLM staff on legislation that will protect many of these deserving areas.

Sincerely,

Joni Bosh

Joni Bosh, State Coordinator

2515 E. Thomas Rd. Suite 16-678 · Phoenix, Arizona 85016
2127 East Osborn Road, Phoenix, AZ 85016

51-1 The Arizona Wilderness Coalition (AWC) proposal was prepared for the Arizona Congressional delegation. In April 1987 the delegation requested input from all interested parties to assist in reaching a consensus on the wilderness issues in Arizona. The BLM appreciates the Coalition's efforts in addressing our recommendations in this EIS. The 287 page document evaluates 72 of 84 BLM administered Wilderness Study Areas (WSAs), including 12 of 15 WSAs addressed in this EIS. Van Deeman, Mockingbird and Apache Box WSAs were not addressed in the AWC report.

We reviewed the 12 WSAs in the proposal. While the AWC recommended larger wilderness areas than BLM, the report revealed no new issues nor substantive errors which would compel managers to reconsider prior recommendations. When compared with the BLM managers' recommendations, the AWC offered all 12 WSAs with larger suitable wilderness areas. Eight of the AWC proposals expanded the official WSA boundary. The acreage comparison is:

WSA	Total WSA	BLM Proposed	AWC Proposed	Reasons for AWC Increase*
1. Black Mtns. North	19,900	18,400	19,150	2
2. Burns Springs	30,600	23,600	27,480	1,2,3
3. Mt. Tipton	34,060	28,170	38,892	1,2,3,4
4. Grapevine Wash	2,200	0	7,680	1,4
5. Grand Wash Cliffs	12,176	0	12,176	
6. Mount Davis	2,560	0	10,880	4
7. Mount Nutt	29,190	27,210	31,430	1,3
8. Warm Springs	114,800	90,600	94,180	1
9. South Bradshaws	640	0	3,520	5,7
10. Sierra Estrella	14,830	14,830	18,190	6
11. Ragged Top	4,460	0	14,995	1,6,7
12. Hoverrocker	2,791	0	37,121	5
13. Van Deeman	1,510	0	0	
14. Mockingbird	5,815	0	0	
15. Apache Box (NM)	932	0	0	
Totals	276,464	202,210	315,694	

* The reasons for the difference in AWC recommendations from the BLM are due to inclusion of: 1) private lands, 2) highly mineralized areas, 3) peninsula type "fingers" of land, 4) recently acquired federal lands, 5) other adjacent federally managed lands not recommended wilderness, 6) lands previously inventoried, found not to meet the wilderness criteria and dropped from further study, or 7) state of Arizona Trust Lands.

Wilderness study guidelines and policy prohibit BLM from including adjacent private lands in the WSA study. It is permissible to have private lands within the WSA perimeter; however, these lands are not federally managed wilderness if the area is designated by Congress.

Highly mineralized areas are usually avoided by managers in wilderness recommendations because the valid mineral rights are still enjoyed by the claim holder should the area be designated wilderness. This means the claim holder is permitted to mine the valid claim when the claim is in the wilderness. Mining inside the wilderness will usually detract from wilderness values.

Peninsulas or "fingers" of land are inefficient to manage for wilderness values. Small parcels surrounded on three sides by private holdings pose boundary posting and vehicular access control problems.

Most recently acquired federal lands, usually by exchange, have not yet been inventoried for wilderness values and therefore cannot be added to the WSA according to BLM Wilderness Guidelines and Policy. FLPMA provides for acquired lands to be considered for wilderness in the Resource Management Plans (RMP). The RMP for the 13 WSAs in the Kingman Resource Area will begin in October 1988 and take about two to three years to complete. Public comments are a vital part of the RMP process.

Other agency administered lands are not a part of the BLM study process. The land use plans of the agency are considered and the agency consulted on the proposed recommendation. Recommendations for South Bradshaws, Hoverrocker and Apache Box WSAs conform to U.S. Forest Service plans.

The wilderness recommendations by BLM are not final decisions. Experience has shown that final wilderness areas are usually determined by a consensus of interested parties. The Congress of the United States makes the final decision on which lands will become wilderness. The AWC proposal will assist the delegation with the Arizona wilderness issue. The report also highlights to Congress that additional lands, in the opinion of the AWC, may be suitable for wilderness, even though these lands could not be studied by BLM because of wilderness criteria restraints.

The size of the AWC Wilderness Proposal makes it impractical for BLM to append the document to this Final EIS; however, a review copy is in each Arizona District Office. Copies of the report may be obtained from the Sierra Club, 3201 N. 16th Street, Suite 6A, Phoenix, Arizona, 85016 for $12.00 each.

52

Arizona Bureau of Geology and Mineral Technology
Geological Survey Branch
845 N. Park Avenue
Tucson, Arizona 85719
(602) 621 7906

RECEIVED
BLM, PHOENIX DIST. OFF.
PHOENIX, ARIZONA
JAN 0 C 1988
AM PM
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December 31, 1987

EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Rd.
Phoenix, AZ 85027

Dear EIS Team Leader:

Please consider these comments regarding the U.S. Bureau of Land Management draft wilderness environmental impact statement (EIS) for the Phoenix district. We will first make some comments regarding generalities of mineral resource evaluation, and then address the mineral resource potential of wilderness study areas in the Black Mountains of Mohave County.

Estimates of mineral potential are based on two types of information: (1) past mineral-resource production, and (2) consideration of geologic setting and other geologic factors that have predictive value in locating undiscovered mineral deposits. The U.S. Bureau of Mines has compiled production data for Arizona, but the quality and availability of geologic information is highly variable. Available detailed geologic maps cover only a small fraction of the total land under consideration for wilderness status in the Phoenix District. Until such maps are made, and detailed information about subsurface rock-type distribution is available, one can not accurately or objectively assess mineral-resource potential. Designation of any area as wilderness without such information would, in our opinion, be premature. 52-1

In the absence of detailed geologic studies, only very general estimates of mineral resource potential can be made based on consideration of past mineral production and regional geologic setting. Such estimates are crude and likely to be inaccurate. In addition, such estimates do not consider that, as exploration and production techniques improve, mining of lower grade ore or even new commodities becomes economic. In light of past mineral production and regional geologic setting, and in the absence of detailed geologic studies, we must express our alarm at the large amount of land proposed for wilderness status in the Black Mountains of Mohave County (Warm Springs, Mount Nutt, Burns Spring, Black Mountains North, Mount Davis, Mockingbird, and Van Deeman wilderness study areas).

The largest gold mineral district in Arizona, the Oatman district in the Black Mountains, has yielded approximately a billion dollars worth of gold at today's prices. Other known mineral districts in the Black Mountains, identified in Arizona Bureau of Geology and Mineral Technology Bulletin 194, have a similar geologic setting as Oatman. The Black Mountains are currently one of the most active gold-exploration areas in Arizona.

A Division of the
University of Arizona

Given the presence of numerous gold deposits at the surface, and the similar geologic setting of gold deposits throughout the Black Mountains, it is likely that large undiscovered deposits are present at depth. We therefore urge great caution in designating land in the Black Mountains as wilderness, and recommend that consideration of such designation await thorough geologic study and mineral resource evaluation. 52-2

Sincerely,

Jon E. Spencer
Assistant Geologist

Larry D. Fellows
State Geologist

JS/jkg

52-1 Geological and mineralogical data currently available for Arizona is very limited. The USGS and U.S. Bureau of Mines are developing field and laboratory information that will add to that supplied by industry and other sources, and time permitting, will be used to base an informed decision. The Arizona Congressional Delegation has expressed an intent to bring the wilderness issue before the U.S. House and Senate during the 101st Congress. If so, many of the Bureau and USGS reports will not be completed in time to allow a complete evaluation of the available data. Interim reports are being prepared, but these lack the detail and depth of research of a fully developed geologic and mineralogic report as would be preferred by the Arizona Bureau of Geology and Mineral Technology.

52-2 As stated in the draft EIS on page 1, Column 1, last paragraph, BLM recommends areas as being suitable for wilderness. Only Congress can designate areas as wilderness.

53

1520 Latigo Dr.
Henderson, NV 89015
January 5, 1987

EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Rd.
Phoenix, AZ 85027

Subject: Arizona Mohave Wilderness EIS

To Whom It May Concern:

This letter contains my comments concerning the subject Environmental Impact Statement. The summary of my comments is that I support wilderness designation for all of the areas studied. I will limit my specific comments to areas with which I have experience in or near.

The proposal for Warm Springs is very good, however it is not clear why you deleted the segment on the south. This region would provide a good buffer, would be easily administered and is not generally an area of high mineral potential. The high mesas of this WSA, with the unusual desert grassland, deserves the highest protection possible. A portion of this section is also crucial bighorn habitat which makes it doubly imperative that this area be protected.

The Grand Wash Cliffs is a highly scenic area deserving of protection. Management should not be a problem because of the inaccessability of the terrain. The area is mostly of moderate mineral potential which indicates that future prospects are likely to do little more than scar the terrain. Wilderness designation would prevent this.

53-1 The recommendation for Mt. Tipton is quite confusing. Why does the suitable boundary include areas outside of the WSA? I agree that this additional area should be wilderness, but the document must be clearer with respect to this area. The excluded portion in the southwest part should also be included. This area is the most pristine of any WSA studied in this EIS and should all be protected.

The Mockingbird and Van Deemsn areas should be studied with respect to the adjoining wilderness in the recreation area. If these areas would be condsidered in junction with adjoining areas, it is very likely they would be recommended. I have hiked in each area and feel very strongly that they should be included. Hikers and wildlife do not recognize that a land ownership boundary exists.

In summary, I feel that the EIS recommends protection of a decent quantity of Mohave Desert lands. I do not, however, understand and accept the removal of small portions of areas that would be a great enhancement to the quality of the area. The fact that big wilderness is better applies here. I also do not accept the exclusion of the small areas because of their size. If they attach to another WSA from an other district or study, the areas should be studied as a whole. Whereas two small areas may be insufficient individually to designate as wilderness, they may make for a fine area considered together.

Thank you for the opportunity to review this EIS and I look forward to receiving a copy of the final product.

Sincerely,

Thomas J. Myers

Thomas J. Myers

53-1 The additional lands that were recommended in the Proposed Action were acquired since the initial wilderness inventory and meet the Wilderness Act Criteria.

54

Duane L. Porterfield
Box 2125
Bullhead City, Az.
86430

Bureau Of Land Management
2015 W. Deer Valley Road
Phoenix, Az. 85027

Dear Mr. Carter:

I would like to address these remarks against the formation of Wilderness Areas nation wide, but particularly in Arizona.

I see nothing wrong with strongly enforcing laws against travel off of existing roadways and Jeep trails. However, to close these roads and trails to vehicular traffic is not preserving them for all Americans as is specified in the Wilderness Act. It is allowing a select few to enjoy country that should be open to all.

When the proposed closures are added to existing closures due to military reservations, Indian Reservations, mining operations, large ranches and private land owners, the areas actually open to public use are getting smaller and smaller.

If these areas are actually "roadless" as they are supposed to be, then close them to any type of development that would make new roads and leave them open to travel on what roads do exist.

I do not believe you can continue to compress an expanding population into smaller and smaller areas. Expansion of cities and housing areas is doing that rapidly enough as it is.

Thank You.

Sincerely,

Duane L. Porterfield

Duane L. Porterfield

55

The Yuma Valley Rod & Gun Club, Inc.

ORGANIZED 1926 — INCORPORATED 1938

P. O. BOX 1608 • YUMA, ARIZONA 85364

Dear Sir,

I am responding to wilderness in the Mohave district. Mohave needs accessible land for recreational use of all forms. The setting aside of wilderness for a few individuals who unfortunately think they are doing what is best for all is not in the best interest of anyone.

Wilderness is not supposed to be a withdrawal of public lands, it is supposed to be multiple use. But only under certain circumstances will hunting and mineral development be allowed. Access will be by foot only in most cases unless a valid claim or grazing lease exist, then only those possessing the lease or claim will have access by vehical.

Not only will people not benefit from wilderness, but wildlife will also be the loser. The fact is wildlife, deer and bighorn sheep have been on the increase due to modern management practices. That means the use of heavy equipment to build or maintain water holes in the desert will not be possible. Under wilderness there will be a minimum tool requirement to repair or maintain existing water holes. This presents a problem because who will decide what minimum tool is. 55-1

Who will guarantee that if heavy equipment needs to be used, the Sierra Club or Earth First to name a few, won't file suit and stop work preventing the maintenance or building of water holes. Without water animals or their young will die. If that happens everybody will be a loser. During the summer months water has to be hauled to catchments for animals to survive. There is no guarantee that practice will be able to continue under wilderness.

Thank You,

Larry Knight

Larry Knight

The Department of Arizona Game & Fish is financed 100% by the revenue from Fishing & Hunting Licenses, plus the Federal tax on Ammunition, Guns & Fishing Tackle.

55-1 The decisions on uses of minimum tool will be made by the "authorized officer."

SIERRA CLUB

Grand Canyon Chapter · Arizona

January 6, 1980
117 N. 2nd Avenue
Tucson, AZ 85705

Arizona Mohave EIS Team Leader
Phoenix District Office, BLM

To Whom It May Concern:

Thank you for the chance to comment on the draft Arizona Mohave Wilderness Environmental Impact Statement. I am largely satisfied with your recommendations, and compliment you on the work that went into them. I do, however, have concerns about two areas with which I am familiar, the Ragged Top and Warm Springs WSAs.

The Ragged Top area contains a truly outstanding example of the Lower Sonoran Desert environment. Though grazed, the lowlands have a very healthy plant community which, in turn, supports a rich wildlife population. It is great habitat for desert tortoise, Gila monster, and a variety of raptors. The uplands are good bighorn habitat.

The area provides outstanding opportunities for primitive recreation by the growing Tucson community. Unfortunately, it also offers tempting opportunities for off-road vehicle use which is already starting to degrade some overland habitat.

The Ragged Top WSA, when formed, was relatively small for a good wilderness area, and bounded by private and state land that could be developed in ways that would clearly degrade the area's wilderness qualities. In the past year, however, the BLM has acquired some key parcels on the south side of the WSA. These allow expansion of the unit to take in most of the Silverbell Mountains, a natural and perhaps vital inclusion to allow good wilderness management of the area. The expansion, with boundaries as proposed by the Arizona Wilderness Coalition, is shown on the enclosed map. The boundaries have been carefully drawn to remove or minimize virtually all conflicts with mining operations and exploration. This expansion greatly enhances the natural and aesthetic integrity of the unit, and would allow creation of an excellent wilderness area that is easily accessible by a large population.

I am pleased to note that you recommended wilderness designation for most of the Warm Springs WSA. This is an important area both for its variety of habitat and its large size, which protects both ecosystem integrity and the quality of wilderness experiences. In general, your proposed boundary adjustments make sense, creating a more manageable unit. However, the proposed McHeffy Butte exclusion seems larger than necessary, and should be bounded on the north side of McHeffy Butte proper, rather than south of it.

More importantly, perhaps, I must also question the proposed removal of a large wedge of low desert land on the unit's south side. This piece of land was not recommended due to "lower wilderness values", which I presume is referring to its relatively flat topography and sparse vegetative cover. Those should not be disqualifying features of a landscape, but have often been use as such in the wilderness process. The fact that one can see for miles across a desert plain does not degrade the wilderness experience. Such vast areas of undisturbed desert pavement are rare, and should be preserved for their own sake.

I have also been told that BLM folk have concerns about the difficulty of closing the vehicle way forming the northeast boundary of this wedge, and may want the freedom to use it during horse and burro roundups. If that is the case, the situation could be easily addressed by designating that wedge as a separate wilderness area divided from the Warm Springs area by two roads (the way on its NE side and the WSA cherrystem to Warm Springs on its NW side). Standing alone, the wedge contains approximately 12,000 acres, more than enough for a good wilderness area.

Please reconsider these boundary issues before making your final recommendations. And again, congratulations on a good study.

Yours,

Dale S. Turner
Conservation Chair
Rincon Group

Printed on 100% Recycled Paper

57

phelps dodge Corporation Morenci Branch, Morenci, Arizona 85540 • (602) 865-4521

January 7, 1988

Mr. Bill Carter
EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 W. Deer Valley Road
Phoenix, AZ 85027

Dear Mr. Carter:

I have taken the opportunity to review the Arizona Mohave Draft Wilderness Environmental Impact Statement in some detail, with special emphasis upon The Apache Box (AZ-040-76) and Hoverrocker (AZ-040-77) areas. As you are aware, these areas boarder the Hells Hole Further Planning Area of the Apache National Forest, for which a mineral resource evaluation has been completed by the USGS (Miscellaneous Field Studies Map MF-1322-E and accompanying phamphlet). This document was not referenced in the Draft EIS, perhaps as a result of the timing of the publication of the documents. This USGS evaluation concluded that:

> **"A moderately high potential for the discovery of base- or precious-metal deposits within the Hells Hole Further Planning Area is related to:**
>
> **1. A favorable geologic environment as determined by geologic mapping and geophysical interpretations.**
> **2. Evidence of mineralization provided by present and past mining activity in areas adjacent to the Hells Hole Further Planning Area, and anomalous metals in stream-sediment concentrates and rock samples of veins and hydrothermally altered rocks locally within the mapped area."**

Figure 2 of that report indicates that the Hoverrocker and Apache Box areas lie within the zone of mineral resource potential. In reference to the area, the report states that:

> **"Ore-deposit models indicate that this geologic environment is most conducive to the formation of stockwork molybdenum deposits, or epithermal precious-metal deposits of the fissure-vein type which occur in the nearby Steeple Rock district."**

Furthermore, the USGS states that:

> **"...because of the proximity of major porphyry copper deposits at Morenci, Arizona, and Tyrone, New Mexico, the possibility that a similar deposit is buried beneath mid-Tertiary volcanic rocks within the study area has to be considered in this appraisal."**

57-1 Although the Draft EIS states on pages 119 and 120 that: "The potential for mineral occurrence in the [Apache Box and Hoverrocker] WSA is moderate", the Mineral Potential Areas Map 3-15 does not so indicate.

Phelps Dodge concurs with the BLM proposed action recommendation of "No Wilderness" for the Apache Box and Hoverrocker Wilderness Study Areas. We appreciate the opportunity to comment on the Phoenix District Arizona Mohave Draft Environmental Impact Statement, and commend your efforts to thoroughly evaluate the total resources of the WSA's in the context of your multiple use management mandate.

Sincerely,

E. M. Schern

E. M. Schern
Director of Engineering
and Geological Services

EMS:bm (74)

cc: AEH
KCB
JLM

57-1 There was an error made on the mineral maps for Hoverrocker and Apache Box, moderate mineral potential should have been indicated on Map 3-15. The mineral write-ups on pages 119 and 120 state that both areas have moderate mineral potential.

RECEIVED
BLM, PHOENIX DIST. OFF.
PHOENIX, ARIZONA
JUL 07 1980
AM PM

58

Arizona Mohave Wilderness
Environmental Impact Statement

PUBLIC COMMENT FORM

Please print neatly or type. Please be as specific and detailed as possible in your comments. If necessary, please continue writing on the reverse side of this sheet.

Wilderness Study Area (WSA) Name: Agache Box

WSA Number:

Comments:
In lieu of any other official designation which would maintain the natural condition of this small but unique canyon and adjacent tablelands for the benefit of resident wildlife, hikers, hunters, photographers, rock climbers, bird-watchers and natural scientists, we recommend Wilderness designation for the Apache Box WSA. The slight evidence of human disturbance shouldn't, in our opinion, be considered important enough to eliminate this WSA from protection.

Surely the old argument of wilderness opponents that such designation will "lock up" important resources has no validity in this case. It would seem that the canyon has little economic importance except to attract visitors of the type mentioned above.

Sincerely,
Dale W. Zimmerman Ph.D.
Dale W. Zimmerman and Marian A. Zimmerman

Please print below:

Dale and Marian Zimmerman	505-538-3398
Name	Phone number

1011 W. Florence St., Silver City, NM 88061
Mailing Address

Please complete this form and return it at the end of the meeting, or send your completed form with your comments to the address below:

Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

Your comments and cooperation will be greatly appreciated.

59

Henri R. Bisson
BLM 24 75 Beverly Ave.
Kingman Ariz.

Jan. 1988

Dear Sir

I own 320 acres of land in the N1/2 of S.33 T25 R.18 W. that is within the boundry of WSA 2-12/42 Mt tipton). In 1971 I drilled a Hospital well on this property and placed a 5000 Gal. Storage tank at the site. This continues to be a needed water source for my livestock. I will need Vehicular access in order to maintain this facilet. There is a jeep trail across sec. 32 S1/2 which is adjacent. I request that this jeep trail be Cherry stemmed. If the WSA ever becomes Wilderness.

59-1

See attached map.

Yours truly
Bill Hamilton

59-1 Federal law requires the BLM to allow reasonable access to private inholdings within Wilderness Areas. In the EIS, Chapter IV., p. 123, Assumption No. 6 states in effect that this agency is assuming the "Approximately 1.2 miles of road would be built across section 32, T. 25 N., R. 18 W., to reach private inholdings in section 33 within the Mt. Tipton WSA, regardless of wilderness designation."

60

FISCHER-WATT GOLD COMPANY, INC.
A Mining and Exploration Company
84 Tucker Avenue #7
Kingman, Arizona 86401
FAX (602) 753-6396
TEL (602) 753-4622

RECEIVED
JAN 11 1988
BUREAU OF LAND MGMT
KINGMAN RA - PLIP

January 7, 1988

Roger Taylor
District Manager
Bureau of Land Management
Kingman, Az. 86401

Dear Roger,

I would like to compliment your office for the excellent balanced and sensible approach taken for the proposed wilderness area boundaries. I would like to comment on a few of your recommendations in areas within which Fischer-Watt Gold Co., Inc. is currently or has in the past had significant mineral exploration activity.

1. Van Deemen WSA #2-07

I fully concur with the BLM recommendation that the Van Deemen area be dropped from wilderness consideration. FWG in conjunction with Arizona Star has recently completed over 150 drill holes and identified +1,000,000 tons of potential ore grading +.036 oz/T Au. There is an excellent chance that the resource can be expanded to several times its current size. The gold resource borders the SE boundary of the WSA and ore grade mineralization extends into the WSA. In fact, the entire WSA is underlain by the Black Mountain detachment fault which is a favorable ore host at several localities along both the eastern and western flanks of the Black Mountains. (Figure 1) Some of our most attractive exploration targets exist within the Van Deemen WSA.

2. Mocking Bird WSA #2-08

Again I concur with the BLM recommendation that the Mocking Bird WSA be abandoned. Although there are no known major ore occurances within the WSA, it is cut near its western and eastern borders by the Black Mountain detachment fault. (Figure 1) Much of the attractive exploration area is covered by gravel or Tertiary volcanic rock and could very possibly host a major burried ore deposit. The area is not currently being explored by FWGC but is within an area of very attractive mineral exploration potential with a geologic setting very similar to that of the Van Deemen.

FISCHER-WATT GOLD COMPANY, INC.

#3 Mount Nutt WSA #2 - 24

FWG has been involved in extensive exploration along the northern and western borders of the Mount Nutt WSA. The area is cut by numerous regionally developed fault structures known to host significant gold mineralization.

Within sections 1 and 2, T20N, R20W, FWG and Santa Fe Minerals have identified a potentially mineable reserve in excess of 400,000T grading 0.15 o/T Au. This reserve is open-ended and subject to expansion both to the NW and SE along a major fault structure.

60-1 Although most of our ore reserve is outside of the WSA, recent sampling by FWG has also identified anomalous gold values in the NW¼ Sec. 12 in a geological setting very similar to that known ore reserve and along the same fault structure.

60-2 The potential for new mineral discoveries in the north and west portion of the WSA are excellent. The boundries recommended by the BLM do open up other critical areas for mineral exploration. However, I would strongly recommend excluding all of Sections 1 and 12, T20N, R20W and all Section 7, T20N, R19W (See Figure 11) from the WSA as they are areas which, in my professional opinion, have a high potential for future discovery.

In addition, I concur with the proposed actions for the Black Mountains North 2-09, Burns Spring 2-10, Warm Springs 2-28/29 WSA's.

Also, as I have offered in the past, FWG will make available pertinent information regarding work we have done in and around the WSA's if it would be of help in your wilderness assessment.

Sincerely,

Perry Dunning
President
Fischer-Watt Gold Co., Inc.

60-1 The lands within the recognized area are potentially valuable for mineral resources.

60-2 These lands in the approximate SW¼ of section 1 are deleted from the WSA boundaries, in the Proposed Action (Partial Wilderness), p.33. The exclusion of sections 12 and 7, T. 20 N., R. 19 W., would create a wilderness management problem by allowing possible incompatible uses and vehicular access along an existing vehicle way to occur. The larger block of current WSA lands to the south of the Secret Pass Wash area would thus be virtually isolated from the smaller block of WSA lands to the north of Secret Pass Wash.

61

FOUR CORNERS WILDERNESS WORKSHOP
P.O. Box 103
Flagstaff, AZ 86002

January 7, 1988

Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

Subject: EIS -- Warm Springs WSA (AZ-020-28/29)

Gentlemen:

The Warm Springs WSA covers includes a sizeable area with a large range of habitat types typical of the Mohave Desert. Within its boudaries is the range of an important desert bighorn herd. The few springs are very important to the native wildlife but once were also important to native peoples as shown by petroglyphs still present. Our members have looked over most of the area and strongly recommend its inclusion in the wilderness preservation system.

The Bureau of Land Management has done a good job of delineating and making a proposal. We do recommend some additions proposed by the Arizona Wilderness Coalition and as shown on the accompanying map.

WILDERNESS STUDY COMMITTEE

Belva Christensen
715 West Apache
Farmington, NM 87401

Jack E. Fowler
P.O. Box 225
Shiprock, NM 87420

Sincerely yours,

Donavon H. Lyngholm

Donavon H. Lyngholm
Secretary

FOUR CORNERS WILDERNESS WORKSHOP
P.O. Box 103
Flagstaff, AZ 86002

January 7, 1988

Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

Subject: EIS -- Mount Tipton WSA (AZ-020-12/42)

Gentlemen:

Part of the Cerbat Mountain Range is included in the Mount Tipton WSA. Primarily the area is part of the Mohave Desert but as elevation increases there is chaparral and even some ponderosa pine. It has excellent habitat for mule deer and bobcat. The area has approximately 230 vertebrate species of which 17 have some special status. There is a small herd of wild horses.

We have explored the area and very much recommend its inclusion in the wilderness preservation system. It is very important to include an extension to the north which would contain much of Antelope Canyon and a portion of Joshua tree forest. Recently acquired BLM lands would permit this. We support the extensions recommended by the Arizona Wilderness Coalition and as shown on the accompanying map.

WILDERNESS STUDY COMMITTEE

Belva Christensen
715 West Apache
Farmington, NM 87401

Jack E. Fowler
P.O. Box 225
Shiprock, NM 87420

Sincerely yours,

Donavon H. Lyngholm

Donavon H. Lyngholm
Secretary

62

Arizona State University

College of Law
Tempe, Arizona 85287-0604

January 8, 1988

EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, AZ 85027

Re: Arizona Mohave Draft Wilderness Environmental Impact Statement: Sierra Estrella Wilderness Study Area

Dear Sir or Madam:

The following are our comments on the Arizona Mohave Draft Wilderness Environmental Impact Statement (September, 1987) as it concerns the Sierra Estrella Wilderness Study Area (WSA). We have hiked and climbed in the Sierra Estrella WSA and are therefore familiar with its wilderness values. The views espressed herein are our own and do not necessarily reflect the views of the College of Law or of Arizona State University.

62-1 We support the "Proposed Action/All Wilderness" alternative. The Sierra Estrella WSA is a magnificent scenic and natural area with outstanding opportunities for solitude and primitive recreation. The WSA's proximity to the expanding Phoenix metropolitan area makes these values especially important and especially in need of protection. The benefits to be gained from wilderness designation far outweigh any negative impacts on motorized recreation or mining.

We offer the following more specific comments on the WSA, the draft EIS, and the proposed action:

1. The Sierra Estrella are among the most spectacular mountains in Arizona. Although the vegetation in the range bespeaks the Sonora Desert, the landforms - knife-edged ridges, sheer escarpments, and deep, V-shaped canyons - are reminiscent of much higher ranges. The combination of desert vegetation and alpine landforms creates an outstanding visual and aesthetic experience.

62-1 The Final EIS recommends the Sierra Estrella WSA as suitable for wilderness designation. Final EIS has been changed to state that the opportunities for primitive and unconfined recreation are considered outstanding and the opportunities for solitude are considered good and are enhanced by rugged ridgelines and canyons.

2. We strongly disagree with the statement in the draft EIS that the "opportunities for seclusion and solitude are not considered to be outstanding" (page 111). We have found the opportunities for seclusion and solitude in the Sierra Estrella WSA to be outstanding. A short walk from the power line road at the southwest boundary of the WSA takes one into the mouth of any of numerous canyons that run southwest out of the mountains. Standing on the floor of one of these canyons, one is in a magnificent garden of desert vegetation, surrounded on three sides by soaring mountain ridges, with smaller foothills on the fourth (southwest) side. The feeling of solitude, seclusion, and separateness from the urban world is complete. This feeling, however, can be destroyed by the presence of off-road vehicles, and it will be destroyed if the area is not protected by wilderness designation.

We urge you to revise the EIS so that the final version reflects this outstanding opportunity for seclusion and solitude that would be protected by wilderness designation but that would be lost if the area does not receive such designation.

3. We note that, contrary to the common assertion that wilderness is accessible only to the young and fit, access to the canyons of the Sierra Estrella WSA does not require physical exertion. As noted above, the canyon mouths are only a short walk from the power line road at the southwest boundary of the WSA.

4. For the slightly more adventurous, scrambling up one of the ridges, either part way or to the crest of the range, offers another type of wilderness experience. The experience of solitude is outstanding here, too, created by altitude rather than by enclosure. The views across to neighboring ridges are exhilirating, and the longer view out over the surrounding desert and more distant mountains is magnificent.

This experience, however, is also threatened by off-road vehicles. The sight, and especially the sound, of motorized vehicles on the bajada below could destroy the feeling of solitude.

We urge you to revise the EIS to reflect this additional outstanding opportunity for solitude, seclusion, and primitive recreation that would be seriously impaired if the area is not protected as wilderness.

5. We strongly disagree with the statement in the draft EIS that the portion of the Sierra Estrella within the WSA "does not offer much diversity in the type of recreation opportunity possible" (page 111). Recreation opportunities range from leisurely strolls or camping in canyon bottoms, through scrambling on lofty ridges, to challenging mountaineering on steep mountain faces, all within the boundaries of the WSA. These opportunities are especially valuable because of the proximity of the WSA to the Phoenix metropolitan area.

We urge you to revise the EIS to reflect this diversity of recreational opportunities within the Sierra Estrella WSA.

6. Contrary to the impression created by the draft EIS (page 112), the opportunities for motorized recreation in the Sierra Estrella WSA are not outstanding. As noted later in the EIS (page 168), only 25 percent of the WSA is accessible to motor vehicles. This is because the steep mountain faces and sharp ridges cannot be traversed by motor vehicles and because the upper portions of the canyons are blocked by steps that, although easily passable on foot, are impassable to motor vehicles. The only portions of the WSA accessible to motor vehicles are the flats, bajadas, and canyon mouths along the southwestern fringe of the WSA. These areas, however, are easily accessible on foot or horseback by a short walk or ride from the WSA boundary. Admitting off-road vehicles into these areas would therefore not add significantly to recreational opportunities in the area, but would instead destroy the opportunity for quiet and solitude that would be easily accessible if the area were given wilderness protection. We therefore urge you to revise the EIS to reflect the limited opportunities for motorized recreation in the WSA and the severe impact those uses would have on primitive recreation if the area is not given wilderness protection.

Finally, as noted in the draft EIS, "Most of the vehicle-based users displaced as a result of wilderness designation would find comparable terrain and recreational opportunities on nearby public land" (page 170).

In summary, we strongly support the designation of the Sierra Estrella WSA as wilderness and we urge the BLM, in the final EIS, to retain the wilderness alternative as the preferred alternative as proposed in the draft EIS. We further urge the BLM to incorporate in the final EIS the changes suggested above so that the final EIS will more accurately reflect the benefits of wilderness designation and the costs of nondesignation.

Sincerely,

Joseph M. Feller
Associate Professor of Law

Gary Lowenthal
Professor of Law

63

809 Beale Street, Suite 222
Kingman, Arizona 86401

January 8, 1988

RECEIVED
BUREAU OF LAND MANAGEMENT
KINGMAN RA - PHOENIX DO

District Manager
Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

Gentlemen:

As a geologist concerned both with preservation of the environment and exploring for and producing from mineral properties, I appreciate the opportunity to comment on the alternatives recommended in this EIS. The scope of my comments will be limited to those only areas with which I have had firsthand experience and exposure.

The first area consists of two adjacent WSAs, the Black Mountains North WSA and the Burns Spring WSA. Although the Portland Mine and north and south access are excluded from the WSA, the potential for additional mineralization north and south of the mine is good. Although it is understood that mining is not prohibited in a wilderness area, such activity is severely limited by requirements allowing operations within a wilderness area. The Portland Mine would not have been a viable operation during its last cycle of operation, 1985 to present, if forced to operate under those limitations. This nonoperation would have deprived the area of several economic benefits. Although there is an existing disturbance and activity associated with the Portland Mine, desert big horn sheep are often seen in close proximity to the mine, even when blasting may be occurring daily. Because of the above, I concur with the alternative recommended for both Black Mountains North and Burns Spring WSAs: partial wilderness.

The second area is the Mockingbird WSA. This area has questionable value as a wilderness area because:

1. No solitude exists; Highway 93 is close enough that road noise is constantly present.

2. Very limited wildlife exists on the WSA and the most noticeable species is non-indigenous, burros.

3. There is little scenic attraction that can be attributed to the area, which consists of primarily of low rolling outwash plains subdivided by intermittent washes. Vegetation is very sparse and in no way unique to northern Mohave County.

The area also has good potential to host exploitable mineralization. Widespread gold occurs on the study area and past small scale production is attested to by numerous pits, shafts, and roads throughout the area. These facts in mind, I again concur with the proposed action: no wilderness.

Sincerely,

James A. Woods

JAW/dp

67

4040 LONG MT. RANCH RD

J. LEONARD NEAL

KINGMAN, ARIZONA 86401

January 8, 1988

Mr. Roger Taylor
Bureau of Land Management
2475 Beverly
Kingman, Arizona

Dear Mr. Taylor:

It is our opinion that the Nodman Canyon is the only place where a road and a pipe line could be reasonably constructed through the Cerbat Mountains.

67-1 We urge you to delete Section 6, Township 24, Range 17, and Sections 13 and 14, Township 24, Range 28 from the proposed Wilderness area. Section 6 lies adjacent to a subdivision that will no doubt be developed in the not too distant future.

We have seen a proposal to take water from Hualapai Valley West. There are obviously a lot of other reasons why we feel Nodman Canyon should be left out of the Wildnerness area.

Sincerely,

John L. Neal

John L. Neal

Mrs. Leonard Neal

Mrs. Leonard Neal

67-1 Of the three sections of land mentioned in this letter, only section 14, T. 24 N., R. 18 W., is in a WSA. This section borders the BLM-maintained Chloride/Big Wash Road as it tops out on the crest of the Cerbat Range. The road through section 14 forms a segment of the southern boundary of Mt. Tipton WSA (AZ-020-012/042). Section 14 presents a well located and road-accessible future trailhead site for nonmotorized visitors to this portion of the WSA.

68

ARIZONA MINING ASSOCIATION

DAVID C. RIDINGER
President

January 5, 1988

Henri R. Bisson, District Manager
Phoenix District Office
Bureau of Land Management
2015 W. Deer Valley Road
Phoenix, Arizona 85027

Dear Mr. Bisson:

COMMENTS - MOHAVE DISTRICT DRAFT WILDERNESS EIS

This letter is written on behalf of the Arizona Mining Association (AMA) and its member companies, whose responsibilities include the production of some two-thirds of the nation's new copper annually, from their Arizona operations. We appreciate having this opportunity to review the Mohave Draft EIS and to submit written comments to you for your consideration. We also commend you and your staff for the work accomplished in collecting and analyzing the data contained in the document.

Our written comments are in two parts: (1) General - Attachment A and (2) Specific - Attachment B, pertaining to individual units.

Thank you for your consideration. If you have questions concerning our written comments, please advise.

Sincerely,

David C. Ridinger

DCR/jc
Attachments (2)

BLM PHOENIX DISTRICT

JAN 07 '88

DM 149
RDM
PA
ADMIN
CRV
MINS 24-P 21/06
RES
M&LA
PRA
LUA
NRA
AMA
Action
Due Date

2702 N. Third Street Suite 2015 Phoenix Arizona 85004 (602) 266-4416

Attachment A

General Comments - Mohave District Draft Wilderness EIS

68-1 1. Inadequate consideration has been given to known mineral resources in various WSA's. Existing and potential mineral deposits have been identified, but then included in areas proposed by BLM as suitable for wilderness. As a minimum, a change of boundary lines could have been proposed to exclude those deposits from wilderness designated areas.

68-2 2. The Draft EIS gives little, if any, consideration to the issue of inholdings, that exist in a number of WSA's. A GAO Report to Congress in June 1987 sets forth that these inholdings do, in fact, present a serious management problem for wilderness. An earlier GAO Report dated July 1984 concluded the same for private mineral holdings within Eastern wilderness areas. No WSA should be considered for wilderness until all inholdings have been properly considered and taken care of - either through acquisition or permitted use with proper access afforded.

68-3 3. The Draft EIS makes no mention of the economic impact of how wilderness designation of certain areas will delay, if not prevent, the development of mines and mining and the effect upon the counties and towns adjacent to those areas, some of which are already depressed. For example, in a single year, La Paz County recorded expenditures of more than $1,000,000 by claim holders in recording and maintenance of mineral claims. Such economic impact must be considered in making wilderness designations.

68-1 Mineral values are one of many resource considerations involved in the recommendations for wilderness designation.

68-2 This issue of inholdings is being resolved. The major owners of the sub-surface mineral estate in the WSAs under study are working with BLM on exchanges that would transfer the mineral estate to the government.

68-3 Page 4, column 2 of the draft EIS addresses the issue of economic impacts.

MOHAVE DRAFT WSA EIS

2-07 Van Deemen (1510 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potential, but can offer no further mineral resource data at this time.

Support BLM's proposal to drop this area from wilderness recommendation.

2-08 Mockingbird (5815 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potenial, but can offer no further mineral resource data at this time.

Support BLM's proposal to drop this area from wilderness recommendation.

2-09 Black Mtns. N. (19,900 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potential, and offers the following minerals resource data to substantiate this position (see below).

We cannot support BLM's proposal that 18,400 ac. (92%) of this WSA be recommended for wilderness.

This entire WSA is checkerboarded with private deeded property and private subsurface mineral inholdings (See Map A). Much of the subsurface minerals are owned by Santa Fe Minerals.

Specific mineral resources are located on Map A and detailed below:

1. Gold, silver, uranium and thorium minerals known to occur - subsurface minerals owned by Santa Fe Minerals.
2. Gold and silver minerals known to occur with past assays ranging to .2 oz/ton Au, and .8 oz/ton Ag with reserves estimated beyond $2,000,000.
3. Uranium minerals known to occur.
4. Gold and silver minerals known to occur with 5 patented claims and past workings indicated by shafts and adits.
5. Uranium and thorium deposits known to exist.
6. Uranium and thorium deposits known to exist - property owned by Santa Fe Minerals.
7. Zeolite minerals known to occur - subsurface minerals owned by Santa Fe Minerals.
8. Several claims and shallow propsect pits with unknown mineral data at this time.
9. Uranium and thorium deposits known to occur - Santa Fe Minerals owns W 1/2.

10. Uranium and thorium deposits known to occur.

11. Gold, silver and iron oxide minerals known to exist.

2-10 Burns Springs (30,600 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potential and offers the following minerals resource data to substantiate this position (see below).

We cannot support BLM's proposal of 23,000 ac. (75%) of this WSA/be recommended for wilderness.

Much of this WSA has private subsurface mineral inholdings owned by Santa Fe Minerals (See Map B).

Specific mineral resources are located on Map B and detailed below:

1. Uranium and thorium deposits are known to occur - subsurface minerals owned by Santa Fe Minerals.

2. Uranium and thorium deposits are known to exist.

3. Uranium and thorium deposits are known to exist - subsurface minerals owned by Santa Fe Minerals.

4. Gold, silver, uranium and thorium minerals are known to exist as well as many prospect pits, trenches and adits, assays range to .3 oz/ton Ag and .04 oz/ton Au.

5. Gold minerals are known to exist as well as past workings including shafts and tunnels in excess of 100'.

6. Gold minerals are known to exist.

7. Thorium deposits are known to occur.

2-12/42 Mt. Tipton (34,060 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potential. We cannot, at this time, provide any new minerals resource information. However, we would like BLM to note that there is substantial private deeded property as well as private subsurface mineral inholdings (See Map C). Much of this property is owned by Santa Fe Minerals.

We cannot support BLM's proposal that 28,170 ac. (83%) of this WSA be recommended for wilderness.

2-14 Grapevine Wash (2200 ac.)

AMA Lands Committee has ranked this Unit as having a "Moderate" mineral potential but can not offer any specific minerals resource information at this time.

We support BLM's proposal to drop this area from any wilderness recommendation.

2-15 Grand Wash Cliffs (12,176 ac.)

AMA Lands Committee has ranked this Unit as having "Moderate" mineral potential, but can offer no further minerals resource data at this time. However, we would request BLM to take note of the fact that Santa Fe Minerals owns a great deal of the subsurface mineral inholdings as indicated on Map D.

We support BLM's proposal to drop this area from wilderness recommendation.

2-21 Mt. Davis (2560 ac.)

AMA Lands Committee has ranked this Unit as having "Moderate" mineral potential, but cannot offer any further minerals resource data at this time.

We support BLM's proposal that this entire area be dropped from wilderness recommendation.

2-24 Mt. Nutt (29,190 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potential, and offers the following minerals resource data to substantiate this position (See below).

We cannot support BLM's proposal that 27,210 ac. (93%) of this WSA should be recommended for wilderness.

Most of this WSA is dominated by private deeded property and private subsurface mineral inholdings (see Map E). Much of the subsurface mineral estates are owned by Santa Fe Minerals.

Specific mineral resources are located on Map E and detailed below:

1. Gold minerals are known to exist, as well as over 660 claims (as of 1984), with assay reported as high as 2 oz/ton Au.

2. Gold and silver minerals are known to exist with very recent assays ranging to .1 oz/ton Ag.

3. Gold and silver mineral resources known to exist plus many prospects, pits, dumps and shafts, with assays reported to range up to 1.2 oz/ton Au and .5 oz/ton Ag.

Plus numerous locations of gold and silver adjacent to and in the vicinity of this WSA substantiating the geologic mineral trends.

2-28/29 Warm Springs (114,800 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potential and offers the minerals resource information below to substantiate this position.

We cannot support BLM's recommendation for 90,600 ac. (79%) of this WSA being proposed as suitable for wilderness.

This entire WSA is absolutely checkerboarded with private subsurface mineral estate inholdings. Most of these inholdings are owned by Santa Fe Minerals (see Map F).

Specific minerals resource data is located on Map F and detailed below:

1. Gold and silver mineral occurrances are known to exist, with early assays of .04 oz/ton Au and .56 oz/ton Ag, while more recent assays run as high as .05 oz/ton Au and .4 oz/ton Ag with "several thousands of tons of ore reserves."

2. Past mining operation of unknown mineral production.

3. Zeolite mineral deposits are known to occur along with numerous trenches and substantial drilling.

Also known gold deposits nearby this WSA substantiate geologic trends for highly favorable mineralization.

2-84A South Bradshaws E. (640 ac.)

AMA Lands Committee has ranked this Unit as having "Low" mineral potential (mostly due to its size and proximity to existing FS Wilderness).

We would prefer to see BLM "recommend" that this WSA be added to the existing FS "Castle Creek" Wilderness.

2-160 Sierra Estrella (14,830 ac.)

AMA Lands Committee has ranked this Unit as having "Moderate" mineral potential, but cannot offer any new minerals resource information at this time.

We cannot support BLM's proposal to recommend all of this WSA as "suitable" for wilderness.

2-197 Ragged Top (4460 ac.)

AMA Lands Committee has ranked this Unit as having "High" mineral potential. Although we can only offer minerals data for sites nearby this WSA at this time, this does substantiate geologic trend for favorable mineralization. We hope to be able to collect more detailed mineral information within the specific WSA at a later time.

Support BLM's proposal that this WSA be dropped from recommendation for wilderness.

4-76 Apache Box (932 ac.)

AMA Lands Committee has ranked this Unit as having "Moderate" mineral potential, but cannot present any additional minerals resource data at this time.

Support BLM's proposal to drop this WSA from wilderness recommendation.

4-77 Hovecrocker (2791 ac.)

AMA Lands Committee has ranked this Unit as having "Moderate" mineral potential, but cannot supply any additional minerals resource data at this time.

We support BLM's proposal to drop this WSA from wilderness recommendation.

69

FOUR CORNERS WILDERNESS WORKSHOP
P.O. Box 103
Flagstaff, AZ 86002

January 7, 1988

Bureau of Land Management
Phoenix District Office
2015 West Deer Valley Road
Phoenix, Arizona 85027

Subject: EIS --Mount Nutt WSA (AZ-020-24)

Gentlemen:

The Mount Nutt WSA is a very rugged and scenic area with many archeological sites. It has important bighorn sheep habitat and also habitat for desert tortoise, Gila monsters and Peregrine falcon. We have looked over most of the area and strongly recommend its inclusion in the wilderness preservation system.

The Bureau of Land Management has done a good job of delineating and making a proposal for the area. We do concur with the Arizona Wilderness Coalition extensions as shown on the accompanying map. We feel it is important to include the prominent landmark, Thumb Butte, even though periodic maintenance will need to be done on the coal slurry pipeline.

WILDERNESS STUDY COMMITTEE

Selva Christensen
715 West Apache
Farmington, NM 87401

Jack E. Fowler
P.O. Box 215
Shiprock, NM 87420

Sincerely yours,

Donavon H. Lyngholm

Donavon H. Lyngholm
Secretary

70

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
215 Fremont Street
San Francisco, Ca 94105

Bill Carter, EIS Team Leader
Phoenix District Office
U.S. Bureau of Land Management
U.S. Department of the Interior
2015 West Deer Valley Road
Phoenix, Arizona 85027

JANUARY 20, 1988

Dear Mr. Carter:

The Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) titled PROPOSED WILDERNESS PROGRAM FOR THE ARIZONA MOHAVE WILDERNESS AREAS; GREENLEE, MARICOPA, MOHAVE, PIMA, PINAL AND YAVAPAI COUNTIES, ARIZONA; AND GRANT COUNTY, NEW MEXICO.

Under the National Environmental Policy Act and Section 309 of the Clean Air Act, EPA is required to review and comment on this DEIS.

We have classified this DEIS as Category LO, Lack of Objections (see the attached "Summary of Rating Definitions and Follow-up Actions").

EPA supports the Bureau of Land Management (BLM) recommendations of wilderness or partial wilderness for six of the 15 wilderness study areas (WSA) considered in the Mohave DEIS. EPA believes that air and water quality will be best protected under wilderness and requests that this be stated in the Final EIS (FEIS) and BLM's state-wide Arizona wilderness recommendation document.

EPA would like to provide information to your office on a new amendment to Federal water quality legislation. Section 319 of the Water Quality Act of 1987 establishes a new program which requires States to assess nonpoint source pollution problems, develop a nonpoint source pollution management program, and implement controls to improve water quality. EPA recommends that BLM coordinate with the Arizona Department of Environmental Quality to help ensure that BLM lands (whether wilderness or multiple-use) are managed in a manner consistent with Arizona's new nonpoint source program. Identified control measures should be implemented on BLM lands to address nonpoint source pollution problems. For your reference, a copy of Section 319 is enclosed.

JANUARY 20, 1988

EPA to BLM, Mohave WSA DEIS, page 2.

We appreciate the opportunity to review this DEIS. Please send us three copies of the Final Environmental Impact Statement (FEIS) at the same time it is officially filed with EPA's Washington, D.C. office. If you have any questions, please call me at 415-974-8083 (FTS 454-8083) or have your staff contact Mr. David Tomsovic at 415-974-8177 (FTS 454-8177).

Sincerely yours,

Deanna M. Wieman, Director
Office of External Affairs

2 enclosures (rating sheet and Section 319)

cc: Dr. Ronald Miller
Arizona Department of Environmental Quality
2005 North Central Avenue
Phoenix, Arizona 85004

71

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VA 22092

In Reply Refer To:
WGS-Mail Stop 423

Memorandum

To: Phoenix District Office, Bureau of Land Management, Phoenix, Arizona

From: Assistant Director for Engineering Geology

Subject: Review of draft environmental statement for proposed wilderness program for the Arizona-Mohave Wilderness Areas, Arizona and New Mexico

We have reviewed the statement as requested in a letter of September 1987 included in the document from the District Manager, Bureau of Land Management, Arizona.

Assumptions for "mineral actions" (i.e., the number and size of future mining operations and numbers of workers to be employed) which are projected to develop under the "all wilderness," "no wilderness," or "partial wilderness" alternatives, are not stated. A description of the economic and technologic models used in these assumptions should be included. 71-1

James F. Devine

Copy to: District Chief, WRD, Tucson, Arizona
District Chief, WRD, Albuquerque, New Mexico

71-1 Chapter 2 of the DEIS under "Minerals Actions" describes the size, type, and numbers of employees for the mining activities analyzed in the draft EIS.

MAYOR
DEAN HACKETT

VICE MAYOR
STEVE H. BUCK

COUNCILMEMBERS
JACK DAY
MARTIN KOCKEN
BOB ROGGE
GLENN E. TUDOR
DAN WHITE

72

P.O. Box 1085
Bullhead City, Arizona 86430
(602) 763-9400

February 4, 1988

Mr. Bill Carter
EIS Team Leader
Bureau of Land Management
Phoenix District Office
2015 West Dear Valley Road
Phoenix, Arizona 85027

Dear Mr. Carter:

On behalf of the City Council of the City of Bullhead City, I wish to inform you that our community opposes any wilderness designation for the following areas:

Mount Nutt WSA	AZ-020-24
Black Mountains North WSA	AZ-202-09
Burro Spring WSA	AZ-020-10
Warm Springs WSA	AZ-020-28/29

72-1 Designation of these areas as wilderness would severely curtail access to public lands for recreational activities in our area. Closure to public access of the Mount Nutt WSA in particular would devastate current recreational opportunities. The effect of the combined proposals is to place a "Keep Out" sign the length of the Black Mountain range.

72-2 The plans seem void of knowledge of the demographics of our area. Our part of Mohave County is home to many retirees (over 40% of the population). It is this group especially that will be deprived of their right to use their public lands.

72-3 The report has left out an analysis of the economic effects on the area (page #4). The only economic condition discussed is mining. Mining has not been a major factor for many years in our area. Our chief industry is tourism. Tourism will be substantially, negatively impacted by the proposals. The economy of Bullhead City is not diverse, it is largely a one-industry town. BLM forced downturns in the tourism trade are counterproductive for all involved.

72-1 Designation of appropriate areas within the Black Mountains as wilderness will maintain and advertise to the public at large an array of unique nonmotorized recreational opportunities. These opportunities will be enjoyed in a protected setting rich in scenery and wildlife - all of it midway between the rapidly growing communities of Bullhead City and Kingman.

These potential wilderness areas contain only a few jeep trails or drivable sand washes. Motorized recreational users would continue to access and enjoy the roads, jeep trails and sand washes within the Black Mountains located outside of these potential wilderness areas.

The scenic cliffs and escarpments of the Black Mountains to the east of the Bullhead City area would be undisturbed. These unmarred vistas will provide a unique and scenic backdrop to the Bullhead City area.

72-2 Data available to BLM indicate that many retired people in Mohave County are avid users of the public lands administered by the BLM, and will continue to use the public lands in the Black Mountains for a wide array of motorized and nonmotorized uses.

72-3 The interdisciplinary team didn't identify any significant economic impacts to tourism from wilderness designation.

Mr. Bill Carter
February 4, 1988
Page 2

The report identifies 64,202 acres of high potential mineral acres that will be locked away from development forever. Many of the acres will be valuable as improved mining technology makes development favorable. The potential jobs lost by the proposed designations needs to be considered before the statement is finalized.

72-4 The report also ignores the proposed Bullhead City airport expansion. Noise levels from the larger jets must be considered in any legitimate environmental impact statement. The airport will contribute to the growth of tourists in the area. Unfortunately, the proposal would limit their access to the lands they own.

72-5 No cost figures for the proposal are included. BLM does not have adequate resources to manage the land now. Federal dollars are certainly not available for the increased management and law enforcement needs related to maintaining a wilderness area in a rapidly urbanizing environment.

The report gives a clear and precise view of the positive effects on recreational use that the proposals would have. However, the negative aspects are barely touched upon. The limitation on off-road vehicle use will substantially decrease the available recreational opportunities, especially those of our elderly residents and visitors. The report mentions all current vehicle ways into the Mount Nutt WSA "receive regular vehicle use by recreational four-wheelers and other motorized users". (page #99). Current motorized use of 1200 visitors per day will be shifted from the current 29,190 acres to only 1,980 acres. Obviously that area is too small to handle the demand. The report states "...overall visitor use would decrease from 2800 VUY." (page #35). 72-6 Until the impact statement is redrafted to consider the economic effect of these actions on the local economy, it cannot be considered a valid document.

72-7 We recognize that comments were due by January 8, 1988. However, Bullhead City was left off the list of local agencies to receive copies (page #178). We feel that our comments are being made on as timely a basis as possible and should be given full consideration.

Our City looks forward to working with BLM on this project. Together we can promote the best and highest use of public lands by the public that owns them. I look forward to hearing further from you.

Sincerely,

Dean J. Hackett

Dean J. Hackett
Mayor

DJH/DAS:ndg

Enclosure

72-4 This EIS considered the environmental effects of wilderness designation and nondesignation of various BLM administered wilderness study areas throughout certain areas of Arizona. The airport and its associated air traffic will not impact management of any future designated wilderness areas in the Black Mountains.

72-5 Basic Assumption Number 2 on page of the FEIS states the BLM will have the funding and work force to implement the chosen alternative.

72-6 See response 72-3.

72-7 Bullhead City was inadvertently left off the list of local agencies sent copies of the draft EIS. Your letter was accepted as part of the public comment record for this document. The BLM is always willing to meet with local governments and other civic groups at any time to explain our wilderness program or other issues concerning our management of the public lands.

RESOLUTION NO. 88R-018

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF BULLHEAD CITY, ARIZONA, OPPOSING THE ADOPTION OF A WILDERNESS DESIGNATION FOR THE KINGMAN RESOURCE AREA IN NORTHWESTERN ARIZONA.

WHEREAS, the City Council of the City of Bullhead City has received and reviewed a copy of the Draft Environmental Impact Statement for a proposed Wilderness Program for the Kingman Resource Area in Northwestern Arizona, prepared in September, 1987 by the United States Department of the Interior Bureau of Land Management, Phoenix and Safford Districts; and

WHEREAS, the Bureau of Land Management's proposed Wilderness Designation would, upon its adoption, severely and adversely impact the public use and enjoyment of over 200,000 acres of public land, much of which is located within a 30 mile radius of the City of Bullhead City, by eliminating use of motor vehicles to reach areas otherwise accessible with great difficulty; and

WHEREAS, at present, Mohave County has approximately 175,000 acres of dedicated Wilderness Area controlled by the Bureau of Land Management; and

WHEREAS, in the State of Arizona, total Bureau of Land Management designated Wilderness Area includes 2,031,885 acres as classified Wilderness Area; and

WHEREAS, the City of Bullhead City, as a rapidly growing area, desires to maximize accessibility to such public lands by the public which accessibility would be undercut or severely limited by this Wilderness Designation; and

WHEREAS, the United States Department of Interior Bureau of Land Managment will, due to budgetary restraints and costs, be unable to adequately monitor and manage, as a Wilderness Area, the Kingman Resource Area; and

WHEREAS, the designation of the Kingman Resource Area as a wilderness will forever adversely impact upon future development by precluding future mining of 64,202 acres described within the Wilderness Report as a high potential mineral acres; and

WHEREAS, retirees, constituting over forty percent of the Mohave County population, will be effectively stripped of any meaningful enjoyment of the Kingman Resource Area due to the prohibition against use of motor vehicles in wilderness areas; and

WHEREAS, tourists, expected to arrive in greater numbers after completion of the proposed Bullhead City Airport expansion, will find greatly limited their access to this area; and

WHEREAS, recreational use of these lands by Bullhead City residents and by tourists to our areas has not, in the past, caused any environmental harm, and has, in fact, contributed to a greater appreciation for these unique areas.

NOW, THEREFORE, BE IT RESOLVED that the City of Bullhead City, Arizona, opposes the proposed Wilderness Program for the Kingman Resource Area in Northwestern Arizona and requests that such proposal be refused.

PASSED AND ADOPTED by the Mayor and City Council of the City of Bullhead City, Arizona, this 2nd day of February, 1988.

Dean J. Hackett
Dean J. Hackett, Mayor

ATTEST:

Alona M. Mougard, City Clerk

APPROVED AS TO FORM:

Stephen A. Avilla, City Attorney

Date: February 8, 1988

CERTIFICATION
THIS INSCRIBING INSTRUMENT IS A FULL, TRUE AND CORRECT
COPY OF THE ORIGINAL ON FILE IN THE OFFICE
DATED: 8 FEB 1988
ATTEST: CITY CLERK OF THE CITY OF
BULLHEAD CITY, ARIZONA

COMMENTS RELATING TO GRAPEVINE WASH WSA

Twenty-nine letters were received relating to the recommendation for the Grapevine Wash WSA. In summary, the letters requested that BLM recommend the WSA for wilderness designation and add the 22 sections south of the unit to make a wilderness area of approximately 16,280 acres. Also, they requested that the proposed mine not be allowed to be developed.

BLM Response:

> Only 2,200 acres of contiguous BLM-administered public land existed in this immediate area at the time of the FLPMA Section 202 mandated wilderness inventory. The large block of private lands recently acquired by BLM through land exchange extending from the Grapevine Wash area southward along the Grand Wash Cliffs for approximately 10 miles, have never been subject to wilderness inventory.

The individuals who submitted comment letters are:

Number	
10	Fred G. Wilson
11	Sharon Stoltenow
12	Audrey F. Klieman
13	Neva Falkenberg
14	Mr. and Mrs. R. W. Goldsmith
15	Mr. and Mrs. James R. Dillon
16	Mr. and Mrs. Quentin E. Tennant
18	Mary McBee
19	Clotee George
20	Russell T. Taylor
21	Richard and Martha Avery
22	Catherine S. Budyach
23	Laurie A. Taylor
24	John W. Newell
25	Joseph Budyach
26	Suzann A. Newell
27	Mr. and Mrs. Allen E. Fox
28	Gerald and Hazel Blomgren
29	Marion Johnson
30	Leo and Donna Freeman
31	Mr. and Mrs. George E. Love, Jr.
32	Hal Barker
33	Karl F. Koehler
37	Helen J. and Donald A. McAlpine
38	Mrs. Donna Keegan
46	Sandra S. Oz
64	Robert G. Brady
65	Mildred I. Hochstotter
66	Bessie D. and W. J. Penny

ARIZONA MOHAVE WILDERNESS
DRAFT ENVIRONMENTAL IMPACT STATEMENT HEARING

Clifton, Arizona
December 17, 1987
7:00 o'clock p.m.

MR. BAUER: Ladies and Gentlemen:

This public hearing will now come to order. First, let me introduce myself. I am Larry Bauer, Deputy State Director for Minerals in the Arizona State Office of the Bureau of Land Management. I have been appointed by the State Director, Dean Bibles, to conduct this public hearing, under authority of the Secretary of the Interior, concerning the Wilderness study of the Arizona Mohave Study Area.

Most of you undoubtedly signed the attendance sheet as you came into the room. If you have not done so, I would like to ask you to sign in now. If you plan to make a statement, be sure to check the appropriate space on the attendance sheet so we can add your name to the list of attendees.

The official reporter seated on my left is Terry Aguilar. She will prepare a verbatim transcript of everything that is said at this hearing. If you wish to obtain a copy of the transcript, you should make your own arrangements with Terry.

This public hearing is being held to obtain information relating to 15 wilderness study areas. Which have been studied by the Bureau of Land Management. A Draft Environmental Impact Statement (EIS) on these areas has been published and is available in the back of the room. In a moment, I will call upon a BLM representative to explain

briefly the findings of the wilderness study.

The purpose of this hearing centers on two issues. First, are these wilderness study areas suitable or not suitable for designation as wilderness? Your views and any information you can offer with respect to this question will be greatly appreciated. Second, is the draft environmental impact statement adequate? Your comments and suggestions on this aspect of the study will also be appreciated.

In arranging for this public hearing notices were sent to United States Senators DeConcini and McCain of Arizona, Bingman And Domenici of New Mexico; and Representatives Stump, Udall, Rhodes, Kyl, and Kolbe of Arizona. Additional notices were sent to Governor Mecham of Arizona, Governor Carruthers of New Mexico, and other elected officials. Notices also have been sent to federal, state and local government agencies, and to organizations and individuals known to be interested in this wilderness study.

Now, for a few words about the procedure. This hearing is not a debate, a trial or a question and answer situation. It is an advisory hearing, and all interested persons may present statements -- either written or oral or both -- or other information pertinent to the wilderness study we are considering today. There will be no cross-examination from the audience, but if anyone fails to understand the statement of any speaker, you may direct a clarifying question

to me and I will determine if it is pertinent. This may seem overly formal, but is is intended to give everyone a fair and reasonable opportunity to present his or her views.

When I have finished my opening statement, I will call upon a Bureau of Land Management representative to explain the BLM's proposed action. That presentation should take about five minutes. Then I will call upon any elected government official present who may wish to make a statement. After that, we will proceed with other speakers.

In view of the number of people who wish to speak in the limited time available, I will begin by limiting each speaker to ten minutes. If you cannot all express your comments in that length of time you may submit further comments in writing. Any written statements submitted here will be included in full in the transcript and will be considered on the same basis as any oral comment. You may also submit written comments until January the 8th, 1988, and these will also be included in the hearing record and considered fully. Written comments should be addressed to the Team Leader, Bureau of Land Management, 2015 West Deer Valley Road, Phoenix, Arizona 85027.

The Federal Land Management Policy Act of 1976, or FLPMA, directed the BLM to conduct a wilderness study of certain public lands. The wilderness study areas under consideration here today were identified by the BLM under

criteria set forth in Section 2 (c) of the Wilderness Act. FLPMA directed the BLM to review such areas and to prepare recommendations as to whether these lands are suitable or not suitable for designation as wilderness. The law requires that a public hearing be held as part of this study area. This is what brings us here tonight.

The BLM has completed the first part of its wilderness study and has published a draft environmental impact statement containing its preliminary findings. Now is is the public's opportunity to comment on the matter.

After the record closes on January the 8th, 1988, there will be a thorough review of the draft environmental impact statement. Your comments will be considered by the State Director in making his recommendations to the BLM Director in Washington, who must make a recommendation to the Secretary of the Interior. After due consideration, the Secretary will transmit his recommendation to the President. The President in turn will transmit his recommendation to Congress. After appropriate consideration, which will include hearings, the Congress will accept, reject or modify the President's proposal. Only Congress can designate an area as wilderness, and only Congress can release a BLM wilderness study area from that status.

As you can see, the BLM preliminary proposal before you here today will undergo comprehensive review, and

this public hearing and your views are a very important part of that process.

Now I will call upon Lyle Holston, an Area Manager of the Safford District of the Bureau of Land Management, to explain the preliminary findings of the wilderness study to you.

MR. HOLSTON: You have to excuse me if I duplicate a little bit of what has already been said.

On October 1st, 1987, the Bureau of Land Management released its draft wilderness environmental impact statement for the Arizona Mohave Study Area. This document assesses the environmental consequences of managing 15 wilderness study areas as wilderness or nonwilderness.

The draft wilderness environmental impact statement is part of the study phase of -- in BLM's review process. This process,as mandated by Section 603 of the Federal Land Policy Management Act of 1976,consists of three phases: Inventory, Study, and Reporting.

The Inventory phase identifies areas with wilderness characteristics as defined in the Wilderness Act of 1964, and designates them as wilderness study areas. This phase was initiated in November 1978 and completed November 1980. The 15 wilderness study areas in this draft environmental impact statement were dropped from the wilderness review by a decision of the Secretary of the Interior in 1982.

A court decision in 1985 restored all 15 wilderness study areas to the wilderness review process. These 15 wilderness study areas are the last to be studied in Arizona by the Bureau of Land Management.

The study phase determines which wilderness study areas will be recommended as suitable for wilderness designation and which will not. In this draft environmental impact statement the preliminary recommendation is that all portions of six wilderness study areas (totalling 202,310 acres) should be designated as wilderness.

The reporting phase begins after completion of this wilderness environmental impact study. A wilderness study report will be prepared to address the study and make wilderness recommendations. This report will summarize the environmental impact statement and the results in the public participation.

The 15 wilderness study areas are located in five Arizona counties and one county in New Mexico. Of the wilderness study areas, ten are in southwestern Mohave County near Kingman; one in southern Yavapai County,north of Lake Pleasant; one in Maricopa County,southwest of Phoenix; one in Pima County,northwest of Tucson; one in Greenlee County,southeast of Clifton; and one in Grant County, New Mexico also southeast of Clifton.

The areas recommended as suitable for wilderness

designation in this draft environmental impact statement include portions of the following wilderness study areas: Black Mountains North, Burro Springs, Mount Tipton, Mount Nutt, and Warm Springs in the Kingman area, and all of the Sierra Estrella near Phoenix. These areas cover approximately 202,000 acres. The remaining portions of five wilderness study areas and all of the nine wilderness study areas totalling approximately 74,000 acres are recommended to be returned to other multiple uses.

The draft environmental impact statement was prepared to assure that environmental impacts are considered in the study phase, along with economic and other considerations. The information in this document has been gathered_ from public meetings, wilderness inventory records, and other sources, including federal, state, and local agencies, private organizations and interested individuals.

Alternatives assessed in the draft environmental impact statement include: (1) an "All Wilderness Alternative" for each WSA, a wilderness study area; (2) a "No Wilderness Alternative" for each wilderness study area; (3) a "Partial Wilderness Alternative" for five of the wilderness study areas; and (4) an "Enhanced Wilderness Alternative" for two of the wilderness study areas.

In the Safford District, only two wilderness study areas are involved in this draft environmental impact statement.

9

They are the Apache Box and the Hoverrocker wilderness study areas. These two wilderness study areas are located about ten miles southeast of Clifton. These two wilderness study areas were studied because they are contiguous to a Forest Service wilderness study area. BLM's preferred alternative recommends that the Apache Box and the Hoverrocker wilderness study areas are not suitable for wilderness. The primary reasons for this recommendation are that the Forest Service wilderness study area was not recommended for wilderness and neither of the BLM wilderness study areas are large enough to qualify for wilderness without the larger contiguous Forest Service area.

A 90-day public review period is presently under way for the draft wilderness environmental impact statement. This review period will end on January 4th, 1988. Comments on the adequacy of the draft environmental impact statement that are received during this review period will be used in the latter decision-making process and included in the final wilderness study or final wilderness environmental impact statement.

As part of the public review process, public hearings on the draft environmental impact statement are being held in Clifton, Silver City, Kingman, and Phoenix.

Members of the public are encouraged to review the draft environmental impact statement and submit written comments and/or attend the hearings and submit oral comments.

10

Thank you.

MR. BAUER: Bill, would you bring me the list of attendees, please?

As we begin to accept public comments I will call your name and ask you to come forward. At that time would you please state your name and then make your comment. Please talk clearly so that the court reporter can record what you're saying. If you have a written copy of your statement, it would also be a kindness if you could give her a copy, so she can get it accurately.

I will be timing the statements. At this time we will start with ten minutes a person. At the time we have used nine minutes, I will indicate to you that you have one minute left. When we get to ten minutes, I will ask you to conclude your statement.

At this time are there any elected public officials in the room who would like to make a statement?

MR. MILLER: Hank Miller.

MR. BAUER: Did you say Hank Miller?

MR. MILLER: Hank Miller. I'm on the Board of Supervisors for the Duncan District.

I don't know just how to start this, but, now, what's the recommendation been made on this Hoverrocker and Apache Box? Has BLM made their recommendations?

MR. HOLSTON: Yes. Our recommendation are that they

11

not be included as wilderness.

MR. MILLER: Well, I would support that a hundred percent. And that's really all I have to say. So I won't take any more time. I'm really not in favor of any wilderness areas, much less ones in this little county where we've got less than six percent patented land.

Every time we have created a wilderness area most of the time we wind up losing a tax base some way or other. It's going to happen up the river here on this Gila Wilderness, I guess, sooner or later. And I'm opposed to any wilderness area.

I'm really opposed to it for the reasons that I hate to see Maricopa County or Washington, D.C. or anybody else come in here and tell us what's best for us in Greenlee County, because they don't know what's best for us. And with that I'll stop.

MR. BAUER: Is there anyone else who would like to make a statement at this time?

No further statements forthcoming, I hereby call the hearing closed.

If anyone would like to meet with the BLM officials and ask them any further questions about any of the details of either of the documents or the maps that we have in the room or the process that went into making the recommendations that we are making, we'll be here. Thank you

12

for coming.

(7:20 p.m.)

* * * *

FORMAL PUBLIC HEARING

ARIZONA MOHAVE WILDERNESS

ENVIRONMENTAL IMPACT STATEMENT

708 Silver Heights Boulevard

Silver City, New Mexico

November 18, 1987

7:00 P.M.

Appearances:

TIM SALT, Chairman
Las Cruces/Lordsburg Resource Area Manager
Bureau of Land Management

LYLE K. ROLSTON
San Simon Resource Area Manager
Bureau of Land Management

Clyde Birkis
Ed Johnson
M. E. Salmon
Jim Goodkind

MR. SALT: This public hearing will now come to order. First, let me introduce myself. I'm Tim Salt, the Las Cruces/Lordsburg Resource Area Manager for the Bureau of Land Management in the state of New Mexico. I have been appointed by Arizona State Director Dean Bibles to conduct this public hearing under the authority of the Secretary of Interior concerning the wilderness study of the Mohave study area.

Most of you undoubtedly signed the attendance sheet when you came into the room. If you have not done so, I would like to ask you to sign in now. If you plan to make a statement, be sure to check the appropriate space in the attendance sheet so we can add your name to the list of speakers.

The official reporter seated to my right is Elsa Valdez. She will prepare a verbatim transcript of everything that is said in this hearing. If you wish to obtain a copy of the transcript, you should make your own arrangements with the reporter.

This public hearing is being held to obtain information relating to 15 wilderness study areas which have been studied by the Bureau of Land Management. The draft environmental impact statement, EIS, on these areas has been published and is available in the back of the room. In a moment, I will call on a BLM representative to explain

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briefly the findings of the wilderness study.

The purpose of this hearing centers on two issues. First, are these wilderness study areas suitable or unsuitable for designation as wilderness? Your views and any information you can offer with respect to this question will be greatly appreciated. Second, is the draft environmental impact statement adequate? Your comments and suggestions on this aspect of the study will also be appreciated.

In arranging for this public hearing, notices were sent to U. S. Senators DeConcini and McCain of Arizona, Bingaman and Domenici of New Mexico, and to Representatives Stump, Udall, Rhodes, Ryl, and Kolbe of Arizona. Additional notices were sent to Governor Mecham of Arizona, Governor Carruthers of New Mexico, and other elected officials. Notices have also been sent to federal, state, and local government agencies and to organizations and individuals known to be interested in this wilderness study.

Now, for a few words about the procedure. This hearing is not a debate, a trial, or a question and answer situation. It is an advisory hearing, and all interested persons may present statements--either written or oral, or both--or other information pertinent to the wilderness study we are considering today. There will be no cross-examination from the audience, but if anyone fails to

1 understand the statement of any speaker, you may direct a
2 clarifying question to me, and I will determine if it is
3 pertinent. This may seem overly formal, but it is intended
4 to give everyone a fair and reasonable opportunity to
5 present his or her views.
6 When I have finished my opening statement, I will call
7 on a Bureau of Land Management representative to explain the
8 BLM's proposed action. That presentation should take about
9 five minutes. Then I'll call upon any elected government
10 official present who may wish to make a statement. After
11 that, we'll proceed with other speakers.
12 In view of the number of people who wish to speak and
13 the limited time available, I will begin by limiting each
14 speaker to ten minutes. If greater numbers should appear
15 that are not here now, we may reduce that time, but we'll
16 begin with ten minutes. If you cannot express all your
17 comments in that length of time, you may submit further
18 comments in writing. Any written statements submitted here
19 will be included in full in the transcript and will be
20 considered on the same basis as oral statements. You may
21 also submit written comments until January 8, 1988, and
22 these will also be included in the hearing record and
23 considered fully. Written comments should be addressed to
24 the Team Leader, Bureau of Land Management, 2015 West Deer
25 Valley Road, Phoenix, Arizona 85027.

1 The Federal Land Policy and Management Act of 1976,
2 FLPMA, directed the BLM to conduct a wilderness study of
3 certain public lands. The wilderness study areas under
4 consideration here today were identified by the BLM under
5 criteria set forth in section 2(c) of the Wilderness Act.
6 The FLPMA directed the BLM to review each area and prepare
7 recommendations as to whether the lands are suitable or not
8 suitable for designation as wilderness. The law requires
9 that a public hearing be held as part of the study process.
10 That is what brings us here today.
11 The BLM has completed the first part of its wilderness
12 study and has published a draft environmental impact
13 statement containing its preliminary findings. Now it is
14 the public's opportunity to comment on the matter.
15 After the record closes on January 8, 1988, there will
16 be a thorough review of the draft environmental impact
17 statement. Your comments will be considered by the State
18 Director in making his recommendations to the BLM Director
19 in Washington, who then make a recommendation to the
20 Secretary of Interior. After due consideration, the
21 Secretary will transmit his recommendation to the President.
22 The President in turn will transmit his recommendation to
23 the Congress. After appropriate consideration, which will
24 include hearings, the Congress will accept, reject, or
25 modify the President's proposal. Only Congress can

1 designate any area as wilderness, and only Congress can
2 release a BLM wilderness study area from its status.
3 As you can see, the BLM preliminary proposal before you
4 today will undergo comprehensive review, and this public
5 hearing and your views are a very important part of that
6 process.
7 Now, I will call upon Lyle Boleton of the Safford
8 District of the Bureau of Land Management to explain the
9 preliminary findings of the study to you. But, first, I
10 would like to explain again that this is not an adversarial
11 proceeding. If you want to ask questions in order to
12 clarify a certain point, please feel free to do so. Direct
13 your question to me, and I'll determine whether it's
14 pertinent.
15 Procedurally, when I call your name, I'll ask you to
16 come forward to the stand, state your name; if you have a
17 name that is complex to spell, it would be a kindness to our
18 reporter if you would also spell your name and present your
19 statement. If you have a written copy of your statement, it
20 would also be a kindness if you would leave it with the
21 reporter so that she can get it accurately.
22 We will be timing statements. At the time you have
23 used nine minutes, I will attempt to indicate that there is
24 one minute remaining. And when you get to ten minutes, I
25 will ask you to conclude your statement. But the statement

1 can be presented for the record and will remain in the
2 record as if it were completed orally.
3 Are there, at this time, in the room, elected public
4 officials who would like to make a statement?
5 I'll turn it over to Lyle now, and he'll explain the
6 preliminary findings.
7 MR. BOLETON: On October 1, 1987, the Bureau of
8 Land Management released its draft wilderness
9 environmental impact statement for the Arizona Mohave study
10 area. This document assesses the environmental consequences
11 of managing 15 wilderness study areas as wilderness or
12 nonwilderness.
13 The draft wilderness environmental impact statement is
14 part of the study phase in BLM's review process. This
15 process is mandated by Section 603 of the Federal Land
16 Policy Management Act of 1976. It consists of three phases:
17 inventory, study and reporting.
18 The inventory phase identifies areas with wilderness
19 characteristics, as defined in the Wilderness Act of 1964,
20 and designates them as wilderness study areas. This phase
21 was initiated in November of 1976 and completed in November
22 of 1980. The 15 wilderness study areas of this draft
23 environmental impact statement were dropped from the
24 wilderness review by decision of the Secretary of the
25 Interior in 1982. A court decision in 1985 restored all 15

wilderness study areas to the wilderness review process. These 15 wilderness study areas are the last to be studied in Arizona by the Bureau of Land Management.

The study phase determines which wilderness study areas will be recommended as suitable for wilderness designation and which will not. In this draft environmental impact statement, the preliminary recommendation is that all or portions of six wilderness study areas totaling 202,210 acres should be designated as wilderness.

The reporting phase begins after completion of this wilderness environmental impact statement. A wilderness study report will be prepared to address the study and make wilderness recommendations. This report will summarize the environmental impact statement and the results of the public participation.

The 15 wilderness study areas are located in five Arizona counties and one county in New Mexico. Of the wilderness study areas, ten are in northwestern Mohave County near Kingman, Arizona; one in southern Yavapai County, north of Lake Pleasant; one in Maricopa County, southwest of Phoenix; one in Pima County, northwest of Tucson; and one in Greenlee County, southeast of Clifton; and one in Grant County, New Mexico, also southeast of Clifton.

The areas recommended as suitable for wilderness

designation in this draft environmental impact statement include portions of the following wilderness study areas: Black Mountains North, Burro Spring, Mount Tipton, Mount Nutt and Warm Springs in the Kingman area, and all of the Sierra Estrella near Phoenix. These areas cover approximately 202,000 acres. The remaining portions of the five wilderness study areas and all of the nine wilderness study areas totaling approximately 74,000 acres are recommended to be returned to other multiple uses.

The draft environmental impact statement was prepared to assure that the environmental impacts are considered in the study phase, along with economic and other considerations. The information in this document has been gathered from public meetings, wilderness inventory records, and other sources, including state, federal, and local agencies, private organizations, and interested individuals.

Alternatives assessed in the draft environmental impact statement include an "All Wilderness Alternative" for each wilderness study area; a "No Wilderness Alternative" for each wilderness study area; a "Partial Wilderness Alternative" for five of the wilderness study areas; and an "Enhanced Wilderness Alternative" for two of the wilderness study areas.

In the Safford District, only two wilderness study areas are involved with this draft environmental impact

statement. They are the Apache Box and Hoverroker wilderness study areas. These two wilderness study areas are located about 10 miles southeast of Clifton. These two wilderness study areas were studied because they are contiguous to a Forest Service wilderness study area.

BLM's Preferred Alternative recommends that the Apache Box and Hoverroker wilderness study areas are not suitable for wilderness. The primary reasons for this recommendation are that the Forest Service wilderness study area was not recommended for wilderness and neither of the BLM wilderness study areas are large enough to qualify for wilderness without the larger contiguous Forest Service area.

A 90-day public review period is presently underway for the draft wilderness environmental impact statement. This review period will end January 6, 1988. Comments on the adequacy of the draft environmental impact statement that are received during this review period will be used in the later decision-making process and included in the final wilderness environmental impact statement.

As part of the public review process, public hearings on the draft environmental impact statement are being held or have been held in Clifton, being held here tonight in Silver City, and in Kingman and Phoenix.

For part of the public review process, public hearings on the draft environmental impact statement have been held

in Clifton, as I stated, and tonight here. Further hearings are scheduled for Kingman and Phoenix.

Members of the public are encouraged to review the environmental impact statement and present comments and attend the hearings that are yet to be held. Thank you.

MR. BALT: Now we will hear any public statements that anybody wishes to make. At this point only Clyde Birkle--is that how you pronounce it?--has signed up indicating he wishes to make a statement. So we'll call upon Mr. Birkle at this time.

MR. BIRKLE: I would like to read you an article from the National Rifle Association Official Journal, November of 1987. I have talked to some of the people in the National Rifle Association, and this is their position:

"Wilderness areas now proposed before Congress comprise a land mass which would be the size of the state of California, the entire state of Nevada, and nine-tenths of the state of Utah. It becomes readily apparent that, just by sheer size alone, wilderness designation of a land area of over 200 million acres will have significant impact on both hunting and sound game management practices.

"The National Rifle Association Board of Directors at its annual meeting held in Reno, Nevada, this past April realized the significance of wilderness designations of

public lands and addressed the policy of the NRA in a resolution unanimously passed by the board. The resolution partly states: "These arbitrary and capricious regulations in fact do not promote the interest of wildlife conservation and the responsible public enjoyment of wilderness lands.'

"Resolved at the National Rifle Association of America"--by the way, there's three million members in there. Maybe not all the members agree, but most of them agree with this statement--"resolved that the National Rifle Association of America opposes any further expansion of the national wilderness system and National Park system and implementing regulations which do not adequately recognize and preserve existing hunting seasons and wildlife management opportunities.

"It is becoming increasingly apparent that those who would arbitrarily close down large portions of public lands to both hunting and unorganized shooting are really anti-gun people whose objective is to curtail in any manner freedom of firearm ownership and use.

"The preservationists's easy answer to the complex problem of multiple-use, sound game management on public lands is to turn their collective backs on the problems, look up the lands, and walk away. It has never been the way of the hunter to turn his back on any wildlife issue. Quite contrary, hunters have always been the ones who have given

their time and energy and billions of dollars to help wildlife and its habitat."

This is from the Albuquerque Journal, Saturday, October 3, 1987:

"Official protests of one sort or another have been filed by federal, state, county, and city officials, by cattlemen, oil and gas operators, gold mining companies, sportsmen, off-road vehicle users, rockhounds, woodcutters, prospectors, NRA members, and so on, opposing the wilderness areas they're trying to make in New Mexico at this time."

And, of course, part of this is in New Mexico. Anyway, here is the way that I and a lot of people think that you should look at these wilderness areas. Here is the strict interpretation of the wilderness area. And I'm not anti-wilderness. Quality rather than quantity, that's what we say. Find quality areas. "Only undeveloped federal lands without permanent improvements such as roads that are larger than 5,000 acres and important from a standpoint of ecology or archeology are eligible under a strict interpretation."

Therefore, like I said, again, look at quality rather than quantity. We feel like that is what is happening. A lot of people are just wanting to make everything wilderness. If they've got some good quality areas and they fit the wilderness criteria, I would support it but

otherwise, no way.

Thank you.

MR. SALT: Thank you. Mr. Birkle, for your comments.

No one else has signed up. We had some other people come in late. Are you interested in making a statement this evening?

MR. JOHNSON: Is the meeting getting ready to come to a close?

MR. SALT: If no one else wishes to make a statement, the meeting will come to a close.

MR. JOHNSON: Well, I guess it's time for me to go on record as supporting the proposal.

MR. SALT: Could we have your name, please?

MR. JOHNSON: Yes, Max R. Johnson.

MR. SALT: Is there anyone else who would like to make a statement? If you'll give your name to the reporter.

MR. SALMON: M. R. Salmon. First, over here on this, these two little areas here, obviously by themselves, they don't qualify as wilderness and I understand that at least on the Arizona side of the line, they've dropped that as a WSA. However, it still remains that if those two areas on either side of the border, those two WSAs plus these two BLM areas, were supported as

wilderness by the BLM and the Forest Service, there would be a wilderness area of considerable size of value.

I think it's important for the BLM and the Forest Service to begin to get together to manage some of these valuable areas before they're lost. As long as these areas aren't loaded in or developed, as far as most of us conservationists are concerned, they're still potential wilderness areas.

Whether they go in wilderness now or not, and whether they're Forest Service or BLM or not, I hope that they'll be managed to protect those values until we can get more protection for those areas.

Now, in a more general comment, I have been a member of the NRA for a number of years, and I can assure you that many people in the NRA don't agree with the comment that hunters are wanting these wilderness areas to be reduced from size or held where they are.

Two of the people--probably the two people most responsible for the wilderness system in this country were Aldo Leopold and Theodore Roosevelt, both avid hunters. I think hunters, along with bird watchers and backpackers, and everybody else, appreciate a quality area that is preserved as nature intended.

And as far as these figures go, 1.2 percent of the lower 48 is designated as wilderness right now. If you put

in all these WSAs, Forest Service, BLM, and otherwise, added to that, you certainly would have, still, a good deal less than five percent of the country in the lower 48 protected as wilderness.

The war between wilderness and development was over a long time ago. Development won. What we're arguing about here are very small percels of land in a relative scale which would add, I would say, to the recreation of the country, add to the wildlife values, and add to what I call quality hunting, which can be found in a wilderness area. Hunting is just as possible in a wilderness as it is in a multiple-use area.

So I think on your recommendation here, you've recommended 202,000 acres, and you're going to drop 74,000. That's the proposal. Generally speaking, I think that is not too bad. I certainly hope we don't lose anything off that. But keep in mind that there are a great many of us who like to hunt as well as watch birds, that appreciate these wilderness areas; and so far as we're concerned, the more the better.

I guess that's it. I'm going to write a letter to the BRA and tell them how displeased I am that they're not representing all of us. Thank you.

MR. SALT: Thank you, Mr. Salmon.

Are there others who would like to make a comment this

be able to get a little more public input if you publicize these hearings a little more. Generally, there are certain people in the know who show up in these hearings, and John supplied me with the time on this.

MR. BOLSTON: We will be here after the hearing. Since it is an official hearing, we don't want to get into a lot of explanation of things. But we will be glad to talk to you after the hearing. We'd be glad to stick around and talk to you about any issues that you have.

MR. SALT: Are there any others?

MR. GOODKIND: My name is Jim Goodkind. I want to talk briefly about the Apache Box. Not just about the Apache Box, but the kind of reasoning that was used to disqualify it. It was noted earlier that one of the primary reasons that was given was that it could not stand alone and that it was adjacent to the Hell's Hole WSA area, which was not recommended.

What that kind of reasoning allows is that, if you have two areas that are adjacent to each other, if one chooses, you can claim each one is adjacent to an area that hasn't
S-1 been recommended; and, therefore, it shouldn't be recommended; and, therefore, neither will be recommended. In other words, the circular kind of reasoning, and I can't degree with it.

Hell's Hole, although it may have been recommended or

evening?

MR. JOHNSON: I was wondering why Silver City was chosen for Mohave, for Arizona? We have a local wilderness proposal much closer to home. It would seem natural that we have the Apache Box and Black Mountains proposals set forth at Silver City. It seems to me kind of confusing the way these meetings are held. Is there any explanation for that?

MR. BOLSTON: I can provide some explanation. We have the two small areas that are managed out of Arizona, one of which is in New Mexico, that the BLM manages. We are required to hold hearings in the vicinity of these wilderness study areas. And because of that, we have held hearings last night in Clifton and again tonight in Silver City, because of these two small areas.

MR. SALT: In answer to the part of the question about the BLM wilderness study areas in New Mexico, hearings were held on those last year. The RIS draft comment period was completed last year at about this time for those lands in New Mexico, administered by the BLM in New Mexico.

MR. JOHNSON: You know, I was trying to find out about this hearing the last couple of days, and I only found out through the grapevine. I called, for instance, the Forest Service, the agencies here. It seems you might

not recommended prior to the Apache Box, could itself use the same kind of circular reasoning and say, "Well, we, the powers that be, feel that Hell's Hole should not be recommended because it's adjacent to an area which has not been recommended."

And I hope it's clear that this kind of reasoning is fallacious. The other thing I would like to say is that, in terms of individuals showing up here and speaking for and against various wilderness areas, I would like to kind of cut through the polarity that develops where we theoretically have development interests here on one side and we have conservationists or environmental interests in another.

I just came from a Chamber of Commerce meeting over here, and I would not like to include myself among the supposed business groups that are opposed to some of these wilderness designations. If anybody has any questions about what I'm referring to, though, in relation to these two contiguous wilderness studies and what I'm trying to say, please don't hesitate to ask me and I'll explain it, if it's not clear. Because this is a kind of Catch 22 reasoning that we can do without. Thanks.

MR. SALT: Thank you, Mr. Goodkind.

Is there anyone else who would like to make a comment or statement tonight?

Then, with that, I officially close this hearing. As Ogle said, there will be BLM people here available to chat now that the hearing is officially closed. If you would like to do that. I thank you all for coming tonight, and thank you for your comments.

(The hearing adjourned at 7:35 P.M.)

C E R T I F I C A T E

I, ELSA VALDEZ, CSR, CP and Notary Public within and for the County of Dona Ana, State of New Mexico, do hereby certify that I took the foregoing hearing in machine shorthand, that the hearing was reduced to typewritten transcript by me; further, that the transcript herein is a true and correct transcript of said hearing, to the best of my knowledge and ability.

ELSA VALDEZ, CSR/CP

My Commission Expires:
March 22, 1988

WILDERNESS E.I.S. HEARING

Tuesday, December 1, 1987
7:15 p.m.

Bureau of Land Management
2475 Beverly Avenue
Kingman, Arizona

Officials present

Beaumont C. McClure
Deputy State Director for Lands and Renewable Resources
BLM
3707 N. 7th Street
Phoenix, Arizona 85014

Roger Taylor
Area Manager, B.L.M.
2475 Beverly Avenue
Kingman, Arizona 86401

Reported by: Debra M. Henson, C.S.R.
P.O. Box 692
Kingman, Arizona 86402

MR. MCCLURE: Good evening, ladies and gentlemen. To begin with, I want to apologize for our delay. The public hearing is now to come to order.

My name is Beau McClure. I am Deputy State Director for Lands and Renewable Resources for the Bureau of Land Management in Arizona. I've been appointed by State Director Dean Bibles to conduct this hearing under the authority of the Secretary of the Interior concerning the wilderness study of the Arizona-Mohave area.

Most of you undoubtedly signed the attendance sheet when you came into the room; if you have not done so, I would like to ask you to sign in now. If you plan to make a statement, be sure to check the appropriate space on the attendance sheet so that we can add your name to the list of speakers.

The official court reporter seated to my right, your left, is Debra Henson. She'll prepare a verbatim transcript of everything that is said, and if you wish to obtain a copy of the transcript, you should make your own arrangements with the reporter.

This public hearing is being held to obtain information relating to 15 Wilderness Study Areas which have been studied by the Bureau of Land Management. A draft environmental impact statement -- an E.I.S. -- on these areas has been published and is available just outside the

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door in the back of the room. In a moment I will call on the BLM representative to explain briefly the findings of the wilderness study.

The purpose of this hearing centers on two issues. First, are these wilderness study areas suitable or not suitable for designation as wilderness? Your views and any information you can offer with respect to this question will be greatly appreciated. Second, is the draft environmental impact statement adequate? Your comments and suggestions on this aspect of the study will also be appreciated.

In arranging for this public hearing, notices were sent to United States Senators DeConcini and McCain of Arizona, Bingaman and Domenici of New Mexico, and to Representatives Stump, Udall, Rhodes, Syl, and Kolbe of Arizona. Additional notices were sent to Governor Meehan of Arizona, Governor Carruthers of New Mexico, and other elected officials. Notices also have been sent to federal, state, and local government agencies, and to organizations and individuals known to be interested in this wilderness study.

Now for few words about the procedure. This hearing is not a debate, a trial, or a question and answer session situation. It is an advisory hearing, and all interested persons may present statements either written,

4

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25 until January 8, 1988, and these will also be included in

DEBRA M. HENSON, C.S.R.

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1 the hearing record and considered fully. Written comments
2 should be addressed to the Team Leader, Bureau of Land
3 Management, 2015 West Dear Valley Road, Phoenix, Arizona
4 85027.
5 The Federal Land Policy and Management Act of
6 1976, FLPMA, directed the BLM to conduct a wilderness study
7 of certain public lands. The Wilderness study areas under
8 consideration here this evening were identified by the BLM
9 under criteria set forth in Section 2 (c) of the Wilderness
10 Act. The FLPMA directed the BLM to review such areas and
11 prepare recommendations as to whether the lands are suitable
12 or not suitable for designation as wilderness. The law
13 requires that a public hearing be held as part of this study
14 process. That is what brings us here this evening.
15 The BLM has completed the first part of its
16 wilderness study and has published a draft Environmental
17 Impact Statement containing its preliminary findings. Now
18 it is the public's opportunity to comment on the matter.
19 After the record closes on January 8, 1988,
20 there will be a thorough review of the draft Environmental
21 Impact Statement. Your comments will be considered by the
22 State Director in making his recommendations to the BLM
23 Director in Washington, who must make a recommendation to
24 the Secretary of Interior. After due consideration, the
25 secretary will transmit his recommendation to the President.

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1 The President in turn will transmit his recommendation to
2 the Congress. After appropriate consideration, which will
3 include hearings, the Congress will accept, reject, or
4 modify the President's proposal. Only Congress can
5 designate an area as wilderness, and only Congress can
6 release a BLM Wilderness Study Area from its status.
7 As you can see, the BLM preliminary proposal
8 before you here today will undergo comprehensive preliminary
9 review, and this public hearing and your views are a very
10 important part of this process.
11 Now I will call on Roger Taylor, the Kingman
12 Resource Area Manager, to explain the preliminary findings
13 of the wilderness study to you, but first I would like to
14 explain again that this not an adversarial proceeding. If
15 you want to ask a question in order to clarify a certain
16 point, please feel free to do so. Direct your question to
17 me, and I will determine whether it is pertinent.
18 Procedurally, when I call your name, I will ask
19 you to come forward to the stand, state your name -- if you
20 have a name that is complex to spell, it would be a kindness
21 to our reporter if you would spell your name -- and then
22 present your statement. If you have a written copy of your
23 statement, it would also be a kindness if you would leave it
24 with our reporter so she can get it accurately.
25 We will be timing the statements. At the time

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1 you have used nine minutes, I will attempt to indicate that
2 there is one minute remaining, and when we get to ten
3 minutes, I will ask you to conclude your statement. But the
4 statement can be presented for the record and will remain in
5 the record as if it were completed orally.
6 At this time are there any elected public
7 officials in the room who would like to speak?
8 (No response.)
9 MR. MCCLURE: Okay. Then we will proceed with Roger
10 Taylor.
11 MR. TAYLOR: Good evening. As Beau told you, I'm
12 Roger Taylor, Area Manager here in the Kingman Resource Area
13 with the Bureau of Land Management. Good to see a good
14 turnout tonight, and for those of you in the back that are
15 standing, there are some seats up front if you'd like to
16 take them.
17 On October 1, 1987 BLM released this Arizona
18 draft Environmental Impact Statement that we'll be
19 discussing here tonight. This document addresses the
20 environmental consequences of managing 15 Wilderness Study
21 Areas as wilderness or non-wilderness.
22 The draft Impact Statement is part of the study
23 phase in BLM's wilderness review process. This process, as
24 Beau said, is mandated by Section 603 of the Federal Land
25 and Management -- or Land Policy and Management Act of 1976.

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The wilderness phase or study that we've been doing is actually in three phases: Inventory, study, and reporting.

The inventory phase, which we have already finished, identified areas with wilderness characteristics as defined in the Wilderness Act of 1964 and designated those areas as Wilderness Study Areas. This phase or this -- the Phoenix district, of which we are a part, was initiated in November of 1976 and was completed in November of 1980. The 19 Wilderness Study Areas in this draft E.I.S. were, however, dropped from wilderness review by decision of the Secretary of the Interior in 1982. A Court decision in 1985 restored all 19 of the Wilderness Study Areas under consideration tonight back into the wilderness review process. These 19 Wilderness Study Areas are the last to be studied in Arizona by the Bureau of Land Management. That's the inventory phase, which, again is already completed.

The next phase is the study phase, which determines which wilderness study areas will be recommended as suitable and which will not. In this draft the preliminary recommendation is that all or portions of six wilderness study areas totaling 202,210 acres should be designated as wilderness.

The last phase or the reporting phase begins after completion of this wilderness E.I.S. A wilderness study report will be prepared to address the study and

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others that have been done in the state, and wilderness recommendations will be analyzed in this report. This report will summarize the E.I.S.'s that have been written and all public participation.

The 19 Wilderness Study Areas contained in this draft are located in five areas, five Arizona counties and one in New Mexico. Of the Wilderness Study Areas, ten are located in northwestern Mohave County north and west of Kingman, one in southern Yavapai County north of Lake Pleasant, one in Maricopa County southeast of Phoenix, one in Pima County northwest of Tucson, one in Greenlee County southeast of Clifton, and one in Grant County, New Mexico, also southeast of Clifton.

The areas recommended as suitable for wilderness designation in this draft E.I.S. include portions of the following Wilderness Study Areas: The Black Mountains North, Burro Springs, Mount Tipton, Mount Nutt, and Warm Springs in the Kingman area here, and all the Sierra Estrella near Phoenix. Again, these areas cover approximately 202,000 acres. The remaining portion of the other five Wilderness Study Areas and all nine wilderness study areas, totaling about 74,000 acres, are recommended to be returned to other multiple uses.

The draft E.I.S. was prepared to assure that environmental impacts were considered in the study phase

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along with economic and other considerations.

The information in this document has been gathered from public meetings, wilderness inventory records, and all -- and other sources from federal, state, and local agencies, private organizations, and from interested individuals.

The alternatives addressed in this E.I.S. include four, the first being All-Wilderness for each Wilderness Study Area, a No-Wilderness alternative for each Wilderness Study Area, and a Partial-Wilderness alternative for five of the Wilderness Study Areas, and an Enhanced Wilderness alternative for two of the Wilderness Study Areas.

As Bazu said, there is a 90-day public review period that's presently underway for the draft wilderness Environmental Impact Statement. This review period will end January 8, 1988. Comments on the adequacy of the draft E.I.S. will be received during this review period and will be used later in the decision-making process.

As part of the public review process, public meetings on this draft E.I.S. have been held in Clifton, Arizona, and Silver City, New Mexico, and this is the third in a series of four, with the fourth meeting to be held in Phoenix, Arizona, tomorrow, December 2, 1987 at the Maricopa Board of Supervisors auditorium. That is at 205 West

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Jefferson. That meeting will also be held at seven p.m. We encourage public participation and review of the draft, and we encourage you to submit your written comments or attend the meetings as you're doing here tonight.

As Bazu said, we have a formal portion of the meeting where we will be asking you to come forward and make comments that will be recorded. We later will at the end of the formal meeting have a question and answer session for those of you that would like to just, you know, if you have some burning question you'd like to direct at us, we will try to field those, given time, of course. I think we'll have plenty of time to do that.

Bazu?

MR. MCCLURE: Thank you, Roger. Henry or somebody, give me the list of people that have come in, please. Might ask again, are there any elected public officials that would like to speak?

(No response.)

MR. MCCLURE: Harry McKee, would you like to speak first, please.

MR. MCKEE: My name is Harry McKee, and I live in Meadview, Arizona, and at least ten times a day I look up at the Grand Wash Cliffs, so these are a very important part of the land to me.

I want to make a statement specifically in

regards to WSA number 214, which is the Grapevine Wash Wilderness Area, but which also includes part of the Grand Wash Cliffs.

I very much disagree with your decision to propose No-Wilderness for the 214 WSA Grapevine Wash and an even more concerned over the mention on page 27 of your E.I.S. of anticipated mining in this area. Such activity would practically destroy the spectacular view of the cliffs that so many of us in Meadview value so greatly, not to mention the endangerment of important archeological sites in this area also.

Because I disagree so strongly with your decision, and also because recent land trades contiguous to this WSA now make available a much larger block of federal land, I will be requesting of Congress a complete reinventory of this WSA and the federal lands now adjoining the area.

I really feel that the entire escarpment of Grand Wash Cliffs here on Grapevine Mesa should be designated Wilderness status from the boundaries of Grand Canyon National Park and Lake Mead Recreation Area on the north down to the Diamond Bar Ranch Road on the south. Please see my attached sketch which designates the sections I feel are very important and that would be most deserving of Wilderness status.

I should mention briefly I think there's one section in there that I have since found out is private, so that will have to be deleted from those boundaries.

Please be aware of how valuable the federal lands within that area are to so many of us and for many more reasons than for just what minerals can be taken from that area.

Thank you.

MR. MCCLURE: Thank you very much. Jim Collier?

MR. COLLIER: Good evening. My name is Jim Collier, and I would like to make some comments tonight as a scientist and as a citizen concerned with the preservation of wilderness. I think wilderness areas in Arizona are valuable scientific reserves where fragile desert plant and animal communities are protected from the impact of man. Wilderness areas also provide valuable solitude for people who take the time and the effort to travel into them.

I think the setting aside of suitable land areas to be managed as wilderness is becoming relatively more important in Arizona as our population grows. I've estimated from figures from the Arizona Department of Economic Security that our population has grown about 76 percent between 1970 and 1985 and is expected to grow another 34 percent between 1985 and the year 2000.

This increasing number of people is placing

pressure on the wilderness areas or wilderness-classified areas that we have. Northwest Arizona is experiencing even more rapid growth along the river.

In addition to an increasing permanent population, Arizona has a large influx of winter visitors, many of whom use our land and rivers and lakes for recreation.

I'd like to make some specific comments on some of the wilderness areas tonight. The first one I would like to talk about is the Mockingbird and Mount Davis wilderness, and I combined these two into one statement because there are additional lands which connect these two areas that have been acquired by the BLM; I would like to see these additional lands, which have been obtained through trades, inventoried under Section 202 of the Wilderness Act and a new study area composed of the Mockingbird-Mount Davis and these additional lands.

This area that is the Mockingbird-Mount Davis and those additional lands contains valuable Desert Bighorn Sheep habitat, and I feel that these areas should be classified as All-Wilderness.

The next area I'd like to talk about is the Grapevine Wash area, a small wilderness area which borders the Grand Canyon National Park. In this case again additional land has been acquired in the neighborhood of

Grapevine Wash; I would like to see this additional land inventoried and included into the Grapevine Wash Wilderness Study Area and would then be classified as All-Wilderness.

The next area I would like to comment on is the Warm Springs Wilderness Study Area, and this area contains prime Desert Bighorn Sheep habitat including lambing grounds and a number of important springs. The area is proposed as All-Wilderness; however, there is an area about McHaffy Butte which is not included in the wilderness classification. I would particularly like to see the McHaffy Butte area included in the All-Wilderness classification.

Potential future mining in the area will displace sheep from that particular area and also disturb them in the neighboring wilderness area classification.

In conclusion, I would like to say that I would like to see as many of the Wilderness Study Areas as possible be classified as All-Wilderness because of the increasing use of our lands through larger number of people who have moved in as permanent residents and those who visit for recreational purposes.

Thank you.

MR. MCCLURE: Thank you. Wilma Brummett?

MS. BRUMMETT: I would -- for the record my name is spelled B-r-u-m-m-e-t-t; the last time I spoke, it went in

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1 the record as Grummett.
2 I would like to quote to you from the U.S.
3 Constitution. It says -- the only congressional provision
4 of the federal ownership of lands is contained within the
5 corpus of the Constitution, and in Article I, Section 8:
6 "The Congress shall have power to exercise
7 exclusive legislation in all cases whatsoever over such
8 district not exceeding 10 miles square as may by cession of
9 particular states and the acceptance of Congress become the
10 seat of the government of the United States and to exercise
11 like authority over all places purchased by the consent of
12 the legislature of the state in which the same shall be for
13 the erection of forts, magazines, arsenals, dockyards, and
14 other needful buildings."
15 That is your United States Constitution. I
16 have read, and I would like to see Roger if there is a copy
17 in the building or here present of the actual congressional
18 act as it was passed by Congress available?
19 MR. TAYLOR: The Wilderness Act?
20 MS. BRUMMETT: The actual congressional act. Do you
21 have a copy of it available?
22 MR. TAYLOR: Yes.
23 MS. BRUMMETT: I would like to make some comments in
24 regards to this particular document. I feel that in the
25 original document it states that they can take a minimum of

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1 5,000 acres where there has been no -- no intrusion of man,
2 no evidence of intrusion of man. I can go through every one
3 of these, and I can show you where there are intrusions of
4 man over and over and over.
5 I do not have any objection to certain areas
6 being wilderness, such as the management and lambing area
7 for our Bighorn Sheep, and when we are talking about people
8 moving into our area, yes, this is true.
9 There's approximately 12 percent of the land in
10 the State of Arizona in fee title; the rest of it is either
11 under the management of the Bureau of Land Management, an
12 Indian reservation, the Bureau of Reclamation, or in some
13 type of restricted area where there are millions of acres
14 all ready for wilderness studies, et cetera, and the
15 esthetic -- as it states in the article -- the esthetic
16 enjoyment of solitude. There is a lot of areas you can use.
17 I'm particularly concerned -- which has nothing
18 to do with tonight -- of the Hualapai Mountains. It has
19 already been passed on, and, as Roger did state, Mr. Watt,
20 when he was Secretary of Interior, most of these areas in
21 Mohave County were thrown out. These are not the only areas
22 that's been considered in Mohave County; some of them have
23 already been addressed and they're not, so the total is not
24 being addressed here tonight.
25 We have probably one of the most highly

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1 mineralized areas in the west in the Cerbat Mountains and in
2 the Black Mountains, and I feel that we should be able to
3 utilize some of those resources if necessary for our
4 communities for schools, colleges, libraries, things such as
5 this.
6 As it is written now, once a Wilderness area is
7 established, there is only those who can walk, hike, and/or
8 ride a horse are going to be able to use this area, that's
9 all.
10 Also, instead of being in the managing position
11 by the Bureau of Land Management, you now go into a police
12 state of control; it goes from management position to
13 control-ownership position, which is contrary to the
14 Constitution of the United States.
15 I don't believe that a very select few of our
16 nation -- what about the old timers that have spent a
17 lifetime should not have the same authority or the right to
18 use and see these beauties that are being locked up for a
19 select few.
20 I feel where it is proper, and I do feel that
21 the interpretation of the congressional act has been
22 prostituted in the interpretation in many instances.
23 I have seen to almost every one of the meetings
24 here. I am probably one of the strongest conservationists
25 you'll ever meet because I believe in preserving what we

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1 have, but I don't believe locking it up where the law says
2 that if in fact you intrude in that area, once it becomes a
3 wilderness area, with a vehicle, you can be incarcerated and
4 your vehicle can be confiscated without due process. That's
5 not the American way, ladies and gentlemen.
6 I'm very concerned about whenever you have less
7 than 12 percent on the tax rolls -- and you and I are paying
8 for the taxes -- to have an awful lot of our key areas --
9 there's already been talk on the Wabayuma (phonetic)
10 Mountain; you take the area there. Now there's been the
11 vast exchange with Laughlin for BLM property. There
12 possibly could be more later on because now we have many
13 other areas with that 5,000-acre criteria. It is stopping a
14 lot of our mineral development. You take our oil leases, et
15 cetera; We have our OPEC problem.
16 So I really think that we should look at this
17 very serious because once you have it done, you can't bring
18 it back.
19 I am very concerned about it being locked up,
20 and whenever you have as many miles in Mohave County as
21 there is -- and I'm not going to be worried about population
22 for the simple reason it's all being taken up by federal use
23 one way or another.
24 Thank you.
25 MR. MCCLURE: Thank you. A. Dawson Henderson?

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MR. HENDERSON: Hi. My name's Dawson Henderson and I drove over from Flagstaff. A little background just to sort of bring everybody up to speed where I'm at, moved to Flagstaff about ten years ago, came from a farming community in -- out of Fresno, did a little cotton, and came out here with my girlfriend to go to school and passed right by Kingman and said boy, what a neat place, let's come back here, so about the last ten years I've been coming back here and between here and the Grand Canyon, been trying to see as much of the place as I can.

I'm a hiker. I'm definitely an outdoor activist. I'd never really been involved in activism per se when I lived in California, but when I moved to Flagstaff, there is a little core of -- small core of hikers and boaters and stuff like that, got in with them and became very active with some of the quote unquote conservation groups like the Sierra Club and got involved in the BLM process, and over the last ten years was involved in the -- when the Arizona Strip Bill, which grew into the 1984 Forest Service Wilderness Bill and got used to the grass roots effort of hundreds of people who are interested in particular areas and worked real hard to find out about them and influenced the Forest Service or the BLM and then talked to their congressional delegation and was -- really felt good about that kind of work, work where we were all in the

trenches working together and we weren't just some Washington group trying to dictate to westerners what their west should be like; we were here and we worked hard and we had a goal and we worked for that goal, and so far as the Wilderness legislation, which is sort of what we are moving towards, we are winding up on these agency reports that go to Interior, and we are sort of getting through this wilderness business and we are all ready to get onto other things.

I'd just like to talk a little bit about the, you know, what the wilderness means to me, what Kingman means to me. Haven't been spending too much time in the office. Seems like a few years ago I came in and talked to Roger Taylor, Mike Kilman when he was the wilderness person, and now Rex, and they sort of showed me where to go and showed me what they were doing, and as a result we have this new document that's out on the table, and in the next week I'll be sending them quite a packet on my sort of criticism of the report; but today I sort of wanted to drive over and instead of criticize the BLM, sort of say nice things about them, and this is I feel sort of my first opportunity to do so.

I've been going to BLM meetings all over the state for the last decade, and this is sort of the first resource area where I felt that we'd had an even chance that

we weren't, you know, bumping our head against a real hefty wall, so I'd like to say some things in support of this district in particular.

First of all, the wilderness and recreational staff here has been accessible. I don't agree with everything they've said, but they've certainly showed me what they've said, let me look at at maps and see field reports and let me know where they're coming from, and as a private individual, you know, that is all I can ask for from an agency; I don't expect to agree with them all the time, but if they can give me the information, I'm happy, you know, and they've decided not to play a numbers game. In other agencies it boiled down to somebody said well, we're going to have X number of acres as wilderness and that's it and forget about everything else.

As I went through this report and started playing little numbers games of my own, I came up with some very curious things. For several of the units if you pick the No-Wilderness proposal and took the BLM figures as to how much of the wilderness would be left, that in at least one case there was more wilderness than when they declared it No-Wilderness. I said whoa, that's a funny wilderness number, but, of course, wilderness is not a numbers game; it isn't how many acres you can get, you know, it isn't that simple.

What the BLM appears to here have done is made some tough decisions, you know, picked several areas, six areas out of a larger number and proposed portions of them to be wilderness, not because it was the right number but because they felt it was what was right, what was manageable, and they definitely have made some obvious management decisions and they've definitely tried, tried to get rid of certain conflicts, most notably with mining, and I have to understand that Kingman is or was a mining community and perhaps we're a little more recreational now, but the mining is the number one, you know, conflict here and this is a mineralized area, so the BLM has had to designate areas wilderness that were quote unquote high potential for mining, you know; that's not going to be a popular decision, but it's the kind of decision we have to make when we're going to balance that against other things like Bighorn Sheep and the fantastic visual resource -- I've forgotten how beautiful your sunsets were as I sat in Angel's eating some Italian food and looked out at the Hualapai Mountains; it was a gorgeous sunset. I get to look at the San Francisco Peaks every night, but what you have ain't bad either.

If I can just make a couple of comments that just sort of struck me with the plan. Couple times tonight we have mentioned a few units like Grapevine and a few

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others that have been contiguous to either Lake Mead N.R.A. or there is another unit that's actually against a wilderness area and the BLM has not proposed any of these to become wilderness, and my feeling on this is if you're not going to propose wilderness, you know, let's say against the Lake Mead N.R.A. and you said it's outstanding and it's a wonderful place but it's like too little or something, I feel that if the BLM is not going to propose a wilderness, the least they can do is put it into further planning; and we have used that with the Forest Service before, and maybe we need to see what the Park Service is going to do with the areas around Lake Mohave and Lake Mead and, you know, if they're -- they're going to propose something as wilderness and the BLM's already kicked it out of the system just because it was a section or two maybe or a section or eight or nine or ten depending on land acquisition, I think that's a real mistake. I don't like seeing things put into further planning; I'd like to get this done, and that would be a reasonable compromise in my opinion.

One more thing, in Flagstaff we've gone from a, you know, a timber community to an obvious recreational community, you know, there are more and more developments going on as far as more golf courses, more people coming up for their second homes; I'm sure Kingman is going the same way. Every time I come over the hill, I look down and say

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those of Mary McKee's. There is a mention -- they are both well worth the highest affordable protection we are able to give them.

The mention of the proposed mining operation on these cliffs upsets me beyond mention. Not only would this set or similar destructive activities cause a number of hikers, photographers, and outdoor-active people a great deal of distress but our older residents; many of those that cannot and aren't able to physically enjoy walking these areas can and do enjoy both of these areas from their cars and from their mobile homes.

I strongly recommend that BLM reconsider their decision and that Grapevine Wash and the entire Grand Wash Cliffs be reevaluated and boundaries extended to include these areas in wilderness.

MS. MCCLURE: Thank you. Craig Friesner?

MR. FRIESNER: My name is Craig Friesner. I have lived in Kingman for over five years. I have lived in Arizona for over 30 years. I'm employed by Mohave County as a deputy county attorney.

Early in January there was a meeting of wilderness advocates at Mohave Community College, and some folks from Phoenix came up and told us basically what was going on. An outgrowth of that was ultimately they asked me to be a local liaison with people who are interested in

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boy, Kingman's grown again, it seems like it's almost a monthly thing, and I think that granted we're not proposing a large number of acres of wilderness when we look at the whole, you know, the whole square acreage of land that the BLM does administer, but when we are talking -- talking about a few percentage points of wilderness, this is a resource, and it's a resource that will be with us, you know, for a long time; and as Kingman and as Flagstaff becomes more recreational oriented, I feel that it will be a valuable resource and it will be worth it, you know, when the time comes.

And I'm just really glad to see that in this case the process appears to be working, you know. I feel like we've got half a chance here. Thanks a lot and thanks for the opportunity to speak.

MS. MCCLURE: Thank you. Sharon Stoltenow?

MS. STOLTENOW: S-t-o-l-t-e-n-o-w. I'm Sharon Stoltenow. I'm from Meadview, Arizona. I've lived in Meadview approximately 17 years. I want to make my statement, and I feel I speak for the majority of the residents in Meadview, those residents being close to retirement age.

The statement deals with the Grand Wash Cliffs 214 in WSA Grand Wash -- excuse me -- Grapevine Wash 214 and Grand Wash Cliffs 215. My feelings on these areas parallel

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wilderness so that we could have input in the BLM proceedings and ultimately in the congressional proceedings.

With that in mind, I have founded a local group called the Mohave Wilderness Association. It's been a remarkable year for me, and I'm going to share a few of those things with you. I will address mostly the ten areas that are in the Mohave County area and I will share with you that I've already visited seven of the ten areas and I find that they all have a very high wilderness value and within the next two weeks, our group will visit the remaining wilderness areas that are under study. I'll do it sort of clockwise starting with the Warm Springs Study Area.

This is a monstrous, huge area with a substantial Desert Bighorn Sheep population, and you should realize right off that the Black Mountains, which run from Franconia all the way north to Boulder Dam, are a remarkable habitat altogether for Desert Bighorn Sheep, and for that reason alone Warm Springs and the next successive north study area should be preserved and protected, but there are additional reasons that Warm Springs and the others should be protected, too.

When I first went out to Warm Springs, it occurred to me that it was a lot of rock and a lot of cactus. I started to see some interesting scenery, but having been all over the rest of Arizona where green is so

1 predominant and such like that. I had some reservations; but
2 on my second visit out there when I heard the noise up to my
3 right and looked and saw the ten Bighorn Sheep within a
4 range of about 200 yards and we spent the next half hour
5 watching one another, my attitude changed somewhat.
6 I also know that Warm Springs has substantial
7 archeological sites. There are several petroglyph sites,
8 there are dwelling sites, and this is an additional reason
9 that the Warm Springs area should be preserved.
10 We -- I say we, and I'll be speaking in general
11 about the Arizona Wilderness Coalition position and the
12 Mohave Wilderness Association position. We show deference,
13 and I think the environmental community in general these
14 days is showing deference to the substantial other
15 interests.
16 There is a large wedge that's being cut out of
17 the south and northwest of Franconia. Both our groups'
18 recommendations will agree with the BLM recommendation that
19 that wedge be deleted exactly because roads cut in from
20 both sides and meet at the Warm Springs area thus cutting
21 into the roadless character of that, and for the further
22 reason that we understand that those roads are necessary for
23 wild burro capture, and Warm Springs is one of the major
24 wild burro habitats.
25 We also show deference to the mining community;

1 will be a great dispute as to the Secret Pass designation
2 because it is popular with the off-road vehicle community.
3 Within the space of 50 yards, I've found a total of eight or
4 ten separate archaeological sites, and it's important to
5 preserve those kinds of treasures for future generations.
6 I've not visited the next units, North Burro
7 Springs and Black Mountains North; I've seen some really
8 beautiful photographs. That continues the Desert Bighorn
9 Sheep habitat, and those two units are divided by the
10 Portland Mine interest and the road that cuts the two in
11 half. Again we are -- will show deference to the mining
12 community; we have no great problem with the areas. I want
13 to say right now we are very happy with BLM and its staff
14 here in general because they've shown a remarkable
15 sensitivity to high wilderness values and they've done a
16 remarkable job of balancing those wilderness values with the
17 competing interests, especially the mining interests.
18 Mount Davis. You go out there and as it's
19 written in the draft Environmental Impact Statement, it
20 talks about four sections, and it recommends that there be
21 No-Wilderness designation there. You get there roughly by
22 going out -- couple ways -- but out the Cottonwood Road and
23 then it's to your north. As you drop off Cottonwood Road
24 towards the river, you can see a big chunk of rock out
25 there; that is Mount Davis itself. The bulk of Mount Davis

1 we know from our conversations with the BLM staff that the
2 mining activity in the McKeffy Butte area is well developed
3 and well into its plans. We are willing to allow that to
4 continue, but I expect there will be some fine tuning to the
5 actual boundary around the McKeffy Butte area.
6 Going north into the Mount Nutt Study Area,
7 I've gone out there about six times, and I find it one of
8 the most delightful places in Mohave County. To go out
9 there in the spring or after a rain and to find large pools
10 suitable for climbing into, to see waterfalls, and in the
11 springtime to see the miraculous flowers, both cactus and
12 otherwise, it will knock your socks off. But then the
13 wildlife there will also impress you substantially. Several
14 of my trips out there have included sightings of Golden
15 Eagles, and I know that most of the study areas in Mohave
16 County are considered suitable habitat for Golden Eagles,
17 but to actually have seen a pair of them which nest in the
18 Mount Nutt Study Area is quite impressive. Additionally to
19 that, this is another area where I've actually seen Desert
20 Bighorn Sheep and that was some three or four weeks ago.
21 There are also substantial archeological sites
22 in the Mount Nutt Study Area, and it ought to be seriously
23 considered that wilderness is an appropriate level of
24 protection against vandalism for those archeological sites;
25 I'm referring to Bighorn Cave and Secret Pass. I know there

1 site in the Lake Mead National Recreation Area, and I'll
2 remark now about the Lake Mead National Recreation Area.
3 Several years ago the agency that controls that
4 area did their inventory, made their recommendations, and
5 suggested what areas were suitable for Wilderness
6 designation. There is a large chunk next to Mount Davis --
7 well, in the recreation area that has been designated
K-2 8 Wilderness, but as you go around the southern circumference
9 of the recreation area, other areas are impacted by being
10 adjacent to the recreation area and being adjacent to
11 recommended Wilderness areas. Mount Davis is merely one of
12 them, and one general recommendation I will make is that as
13 you prepare the final Environmental Impact Statement, try to
14 delve into the documents that show what are the proposed
K-3 15 wilderness areas within the recreation area. Now, I
16 understand that's difficult and there may -- there's only
17 one copy I have heard about in Mohave County or it might
18 even even be in Boulder City. Anyway, that should be
19 considered on those areas which are adjacent to the
20 recreation area.
21 Mount Davis is peculiar because there have been
22 substantial land acquisitions, as is the case with Grapevine
23 Wash. My recommendation is that a roughly rectangular area
24 be carved out of all of the BLM public lands in the Mount
25 Davis area and to be recommended as Wilderness; I recommend

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that now instead of further study. You can mark the lines now and you can show it to have high wilderness value, and I would recommend that we go ahead now and designate it. Remarkable scenery. Looks like in some instances like badlands country, and then you have a bajada there which is relatively unspoiled; off-road vehicle use has not impaired it at this point, but give it ten years and it will be impaired.

Grapevine Wash for similar reasons needs to be reconsidered. But the Arizona Wilderness Coalition has outlined a larger boundary -- all these lands are now BLM lands -- and it should be considered as wilderness now.

Mount Tipton is delightful. I would like special attention paid to the north corner where Antelope Springs resides. I know that active land acquisition is going on right now. In your recommendation you might suggest that Congress automatically bring those areas into wilderness as they are acquired.

Mockingbird and Van Deesen. I have visited them, and in deference to substantial mining communities, both the Arizona Wilderness Coalition and the Mohave Wilderness Association will not be recommending that those areas be designated Wilderness.

Grand Wash Cliffs is remarkable not only for its scenery but for its proximity to the Joshua Tree forest

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and remarkable wildlife.

I would encourage all of you to get out into the countryside, visit these areas, and if you cannot get your written comments in by the January 8 deadline for BLM purposes, please contact your congressional delegation.

Thank you very much.

MR. MCCLURE: Thank you. Bill Welsh?

MR. WELSH: My name's Bill Welsh, spelled W-e-l-s-h. I've lived around this area for about 27 years, been hiking around most of the different areas; I've hiked Warm Springs area, Mount Nutt, Mount Davis, Grapevine, Burns Springs, Mount Tipton, Van Deesen, and Mockingbird. Over the last 20 years, I've worked in cooperation with the Arizona Desert Bighorn Sheep Society, the BLM, the Arizona Game and Fish, the National Park Service in buildings. I've worked on some eight waterhole projects for Bighorn Sheep and for other wildlife. I don't belong to any organizations, and I don't represent any organizations; I'm here as a concerned citizen. I've owned three dune buggies and two jeeps. I've traveled around a lot, and I believe that respect should be shown for the environment and that you should stay to existing roads, not run over every cactus you can find just because you have a vehicle that can do it. Cultural resources and archeology. I've been doing volunteer work with the BLM and was asked to look for some pictograph sites

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out in one of these areas and stuff, and there were six known sites that were found and recorded by U.N.L.V. and I now know of 25 and this is probably about a two-section area.

I would like to see all of these different areas designated as total wilderness areas. I would gladly not drive into them anymore, and I intend sometime to be an old timer, and when I get too old to walk around, I'd just as soon be able to look out there and see some things that haven't been completely impacted.

I've seen Lake Havasu City when it was Site 6, and the only thing that was down there was an old man that sold waterdogs in a little trailer on a dirt ramp to launch your boat. I've seen Bullhead City grow and it's continuing to grow and the impact that is going to start coming into the Black Mountains I've seen, I've been out there. I've seen lots of ATVer's out there, lots of off-road people. I'm an off-road person; I've seen people driving up and down the hills. I've seen them chasing burros. I've seen them chasing Bighorn Sheep. I'm not saying that everybody does this, but I'm saying that this is stuff that needs to be stopped or it's not going to be there in the future for our children or our children's children to be able to appreciate.

For the off-road people and stuff like that,

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there's a lot. There's the off-road areas that are in Nevada; I've been involved in some of them. There's some in southern California, and there's still the Music Mountains here, the Hualapai Mountains, the Peacock Mountains, the Aquarius Mountains, and most of the Cerbats which are still pretty much open to off-road vehicles.

I think that some of the mining things, I think some of them will probably remain open, but I've also seen things like parts of the historic Beale Road that have been bulldozed by somebody that wasn't paying attention to what they were doing; they knocked over petroglyphs and stuff without even realizing what they were doing.

I know you can't stop change, but I think that change without purpose and forethought just shouldn't be. That's what I have to say.

MR. MCCLURE: Thank you. Charles Weekly?

MR. WEEKLY: My name is Charles Weekly. I work with Western States Minerals. I'd like to talk about the Mockingbird area.

From the work that we have done out there, we have found no mineable reserves at the present time, but there is potential for mineable gold deposit; the geologic environment is favorable for a mineable gold deposit. The associated structure is also associated with the Portland Mine and the Pilgrim Mine along with several others. There

is widespread anomalous gold values, and there has been past gold production.

Thank you.

MR. MCCLURE: Thank you. Bill, are there any others signed up to speak?

(No response.)

MR. MCCLURE: Is there anybody that has said maybe or no but has changed their mind and would like to speak?

MR. DENNY: I didn't know I was supposed to sign.

MR. MCCLURE: You may speak.

MR. DENNY: My name is Rex Denny. I'm concerned about the Burro Creek area on the -- here it's never been mentioned, but it is supposed to be in the wilderness thing. I have mining claims there I've had for 22 years, and it's strictly mineral, minerals and clays, very little wildlife, very little anything out there except clay and magnesite.

The roads go around two sides of it. There is power lines through it, a gas line through it, and I can see no reason why it should be included in any wilderness area.

Here's the map of it, and this is the wilderness area, comes right out here. This is the mining claims, and there were all mins and a few up here, 1800 acres of them. I've had them for 22 years and I've had them leased for a 25-year lease and I had turned it back two years ago on account of the wilderness area, cost me 250,000

the nonessential mining operations by War Board Order L-208.

Between 1942 and 1980, there was a minor amount of prospecting but no serious involvement in mineral exploration by major mining interests. We came into the area because we felt that the old timers did a very good job of identifying all the obvious resources but perhaps missed some of the more subtle clues.

We initiated our efforts in the Oatman district and spent two and a half million dollars, drilled over 42,000 feet of core hole, and identified some very important geological features that were related to past productive ore shoots at Oatman but would also be helpful tools in exploring other parts of the Black Range that have similar geology.

Also in 1980 there was a new type of geological environment that was discovered, and this is what we call a detachment fault environment. Between 1980 and the present time, there's been over eight million ounces of newly discovered gold in the desert southwest. The nearest major discovery to the Black Range is the discovery by Cyprus Minerals down at their Copperstone Mine south of Parker, but we saw almost an identical geological environment extending for about 70 miles of length along the western flank of the Black Range, then extending back along the eastern edge and terminating about at the Pilgrim Mine.

flat dollars, and I would like to see them -- those three sections left there right on the edge.

That's all I have to say and thank you.

MR. MCCLURE: Thank you. Anyone else who would like to speak?

MR. DURNING: My name is Perry Durning. I'm a geologist with Fischer Watt Gold.

MR. MCCLURE: Would you spell your last name, please?

MR. DURNING: D-u-r-n-i-n-g. I'm a geologist with the Fischer Watt Gold Corporation. We've been active in the Kingman area since 1979, and I'm going to speak with specific reference to the Black Range, which is an area that I love very much, both from the recreational point of view, but also from its mineral exploration potential.

Just to give you a little bit of background, the Black Range in Arizona, specifically the Oatman district and the Katherine's district, were responsible for a past production that was in excess of two and a half million ounces of gold. At today's prices that would be valued in excess of one billion dollars.

In the past the majority of exploration came from high grade vein structures. Many times the old timers were able to pan some free gold or detect it by assays on the surface samples, which they took. Mining essentially stopped in the Black Range in 1942 with the closure of all

We have made detailed studies of all of the areas of known past gold production and have identified a number of areas where there's a very high potential for major mineral discoveries. The areas that we have a particular interest in and which we feel deserve to remain open for mineral exploration and potential mineral development are the Van Deemon area, which is an area that im excess of $400,000 has been spent im drilling in the last two years. Thus far a small resource, about a million tons of .036 ounces per ton of gold has been discovered, but the area that had been proposed for wilderness covers the area of perhaps greatest potential on the property, and I want to concur with the BLM's recommendation that the Van Deemon Wilderness Area be withdrawn from further wilderness consideration. We have a major drilling program that will be starting up there early in 1988 to hopefully find additional reserves on the property.

The next area, and admittedly it's one of the most scenic areas in the Black Range, is Mount Nutt Wilderness Area, specifically around Secret Pass. Santa Fe minerals in 1985, 1986, and '87 spent approximately three quarters of a million dollars drilling out a small resource on the property. We acquired the property in 1987, have done some further drilling, expanded those reserves, and have identified very significant future mineral exploration

potential. We have a major drilling program that will be beginning in January to determine whether or not our geological concepts are correct.

The areas that the BLM has proposed be included for wilderness and those that they have proposed be excluded we are in full agreement with. It gives us ample area to do our exploration and gives us adequate protection for identifying future reserves in the northern part of the Mount Nutt Wilderness Area.

The third area is the Black Mountains North-Burns Springs area, specifically around the Gold Chain area. We also has a major exploration program in the past in the vicinity of the Gold Chain, and although we did not find economically mineable reserves, we found very substantial areas of low grade gold values; the area's largely covered by pediment gravels or post-mineral tertiary volcanics. We have the tools to explore with some sophistication under this cover, and I think the recommendation that that area in the vicinity of the Gold Chain be withdrawn from wilderness consideration is in concert with what we in the mining industry would recommend as well.

I do have some technical papers which I can leave with you which describe in minor detail what we have done on the properties to date and what we feel some of the potential might be.

MR. MCCLURE: We appreciate anything you can offer. Thank you. There was a gentlemen in the back. Yes, sir? Excuse me, a lady.

MS. BOWMAN: My name is Sue Bowman, and I'm from Dolan Springs, Arizona. My mining instructor calls me a fence writer because I have many witnesses that are out here in the mining community and I'm also an environmentalist.

My main concern tonight is that we go on record to preserve the Mount Tipton Wilderness Area, particularly the northeast corner, Antelope Canyon and the pinnacles there. Also want to support my friends from Meadview on the Grand Wash Cliffs in the Grapevine Wash area. It is, particularly since it is along the edge of the National Recreation Area there, it should be preserved. It is a beautiful area and there's no words that can describe this beautiful area. People can drive at least to the Diamond Bar Ranch and enjoy this beauty. They can drive out to Pearce Ferry and enjoy this beauty even as you go along through the Joshua forest.

Some of the things I'd like to talk about tonight on Wilderness Study Areas I concur that, let the mining friends have them; maybe we can consolidate and keep a little area for the Bighorn Sheep, but we ought to be able to compromise and work together and all enjoy it and still have prosperity for our county.

Thank you.

MR. MCCLURE: Thank you. Is there anyone else that would like to speak? Yes, sir, you in the back.

MR. STOUT: Bob Stout. S-t-o-u-t. I didn't prepare a statement, but my name's Bob Stout. I've lived here, oh, 14 years. I came to Kingman because I enjoy it here. I enjoy what we are talking about, you know, the wilderness thing. At the time I moved here, it was -- basically it was the mountains, the ability to go out and do the things that I couldn't do in Iowa. You know, in Iowa you could work, make a lot of money, go to the cultural things, and then fight for a parking spot at the state park on Sundays, and Kingman and the area here didn't have that.

I like to hike. I like to drive. I like what it's all about, and I see a problem, you know, with the wilderness. It's nice. We need it.

I just went back east. I just got re -- well -- re -- well, I went back again. My wording isn't coming tonight, but the idea is that back there has not changed; people are still doing what they do. They are still staying on the highways, and if they want to hunt, they ask Farmer Jones, you know, if they can.

I'd like -- there's one thing that I -- that kind of gripes me, and it's just maybe I feel I would like to express my definition of what a mining scar is. A scar,

you know, is something -- as we get older, we get scars on our face and our body; they all have a story. Our cars get dumps, a shopping cart, no good, but if you go out and maybe get stuck, that makes something on your car, but the bottom line is that minerals are also necessary, as are Bighorn Sheep and the burro and the untouched-by-man beauty, but people go to Las Vegas -- it's pretty there -- I don't care for Las Vegas. I'd rather go sit in a pit in a mine and catch the feeling of what the excitement, the unknown that the old timers felt when they were working there, you know, and it was what America was all about to me. The pioneering, they would go out, they would find something that would excite them to go back for more, and meanwhile we all drove our cars here; they're all made out of metal and the metal came out of the ground, but there's a balance. But mining to me is not necessarily a scarring unless it was just thrown in. If it was done with purpose, to me it's okay.

Warm Springs, I want to -- however you say -- the east part of Warm Springs, the first couple of miles is a desert flat; there's not any difference than all the way from Barstow all the way to Seligman to me, you know.

The Black Mountains is beautiful. I believe probably should be, you know, as far as I'm concerned, the Bighorn Sheep and all of that is up there. What I'm saying

is in the Warm Springs area, the valley below doesn't really have an unusual value. To me, you know, it's neat hiking country up above. Everybody has their own opinion, and I don't -- I haven't been up there that much. There is some beauty in the area.

That's about all. I just wanted to -- mining is not always a scar, and it's necessary as our animals to eat, and do the farmers in fact scar the country with their plowing? Well, maybe and maybe not, you know.

Well, thank you.

MR. MCCLURE: Thank you.

MR. MCCLURE: Anyone else? I see a hand.

MR. LYNGHOLM: My name is Don Lyngholm, and I'm from Flagstaff. I'm with the Four Corners Wilderness Workshop, which in turn is part of the Arizona Wilderness Coalition, and we would like to compliment the Bureau of Land Management for their Wilderness proposals. The document talks of alternate alternatives that they have prepared. Of course, we aren't quite satisfied with it and we do support some modifications and inclusions which will be sent for the record, I'm sure.

One of the most important values of Wilderness designation is that it protects natural habitats, and protection of habitats in their natural state is absolutely essential to the survival of many wild species.

survival. How much cheaper it would have been to have protected their habitat years ago.

Unfortunately, species are still becoming extinct at an alarming rate. Wilderness designation today costs the taxpayers little and even adds to the national treasury indirectly through money spent by recreationists.

This a very appropriate time to act in the protection of wild lands. Protection of diverse habitats is one reason the environmental groups add areas to proposals of government agencies. Many times unusual or even unique habitats are left out for some supposed lack of solitude or for administrative convenience.

However, saying that, we again wish to compliment the Kingman office on the quality of their Environmental Impact Statement; we realize that you face many opposing pressures.

MR. MCCLURE: Thank you. The gentleman in the back?

MR. JOHNSON: My name is Wayne Johnson, and I didn't really plan on having anything to say here, but kind of got caught up in everything.

Mine's going to be basically involved only with the Grapevine Wash area; it's the only one that I, being a new resident of Arizona, have any real familiarity with.

In the report, in this E.I.S. that they've prepared, it seems that the Grapevine Wash because of its

Some 25 percent or more of drugs we use were discovered in wild plants; there's the old example of, for example, quinine, which was used to treat yellow fever. And then from a wild mold, why, we received penicillin. And recently there's been some great strides in the treatment of leukemia, which came about when a compound found in a kind of a low weedy form called a periwinkle was tested.

Less than 20 species provide the bulk of our diet. In fact, the grasses rice, wheat, and corn widely overshadow other sources of food, and it's evident that we are putting too much dependence on those few sources when in earlier times and among more primitive cultures, many other plants were found to be edible. Yet even among these major food crops, we need to find wild varieties to cross with them to maintain their vigor and disease resistance.

Only a short time ago no one would have considered the jojoba, a wild bush in our deserts, to have outstanding value, but now it's being raised as a crop to provide a prized unsaturated liquid wax.

About the soundest reason for preserving the great number of wild species is that it is impossible to know what value any species may ultimately prove to have. At present we have been conscious enough of the danger of losing rare species such as the whooping crane and the California Condor to spend millions to ensure their

relatively small size is being sort of ignored as far as the wilderness is concerned. Says it's roughly 2200 acres, and on page 27 of this report they say that it has topographic barriers which would basically limit vehicular traffic in the area and it is adjacent to the Lake Mead N.R.A. and is also, as we discovered earlier, was adjacent to the Grand Canyon National Park. To me that would make it relatively easy to manage since it already is cut off they say from vehicular traffic.

Also on page 39 of the report they're talking about the values of wilderness area there, and they have noted large roosting pit sites which are probably eligible for the National Registry of Historic Places. The sites have potential for future research and developments as tourist attractions in the Meadview area. These particular pits appear to be very old and may represent some of the earliest examples of large roosting pits used by Paiute Indians in historic times. I feel that that, as it's mentioned in the report, has some value.

Living in Meadview, I don't particularly want to have the potential of looking out on these cliffs and have a nice 300-acre open pit mine on the side of those cliffs. I also, being a young member of the Meadview community, am quite aware of the retirement age that most of their residents are, and I wouldn't appreciate having the

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large gravel trucks pounding down my streets; I can imagine they wouldn't either.

That's all I have to say.

MR. MCCLURE: Thank you. Yes, sir?

MR. TENNANT: I put a question mark on there, but like the last man said, I got caught up in it. My name's Quentin Tennant. I live in Meadview. You want the name spelled? T-e-n-n-a-n-t, first is Q-u-e-n-t-i-n.

I lived in the area for going on nine years in Meadview, and, of course, we went out there for the environment, which was -- which is obvious -- for the tranquility, the peace.

I have just a few things here. I brought those in from neighbors; they're all signed statements of their concern, which speaks to this -- primarily to the proposed mining activity in the Grapevine Wash, and if I may, I would just read a few samplings; it's very short.

MR. MCCLURE: You may do that.

MR. TENNANT: "We do not want an open pit mine in the Grand Wash area. This would spoil the beauty and environment of our area. We would like this area made a wilderness or part of the national park." And it's a 12-year resident.

"We don't want an open pit mine in the Grand Wash area of Meadview. We moved out here four years ago

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the cliffs are defaced in any manner, they cannot be restored to their original beauty. The views in Meadview are spectacular and overshadowing colors reflecting by a setting sun cannot be duplicated in the United States of America. Please put the Grand Wash-Grapevine Wash and the cliffs under a Wilderness Area designation without delay."

And I would say that all of this sounds biased, slanted perhaps, but it's statements mostly from persons my age. There are a lot of retirement, a lot of retired persons out there, there are younger ones coming in, so if it sounds biased and selfish, we won't have it for that many years, but certainly we could leave it to our sons, our grandchildren and your grandchildren, and that's about all I have to say. Can I leave this with you?

MR. MCCLURE: Yes, we'll make those part of the record. Thank you very much. Anyone else like to speak? Yes, sir?

MR. ISAACSON: My name is Mr. Isaacson, Richard Isaacson and I'm the president of the Valley Pioneer Water Company out in Golden Valley and I have been here since 1972 after my military retirement, at which time I went to work for Duval and I worked there for 13 and a half years. I'm presently also retired from the Duval Mine, receiving my retirement check from Pensoil, who owned it in the first place, and then sold it to Bagdad, so I'm not against mining

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because of the quiet and beauty, and as much as we have grown or continued to grow, we don't want" -- they're referring to the area -- "we don't want this to happen to our community. However, we are for our area being made wilderness or part of the national park. We are protesting against any mining operation which may be implemented on the slopes of the Grand Wash Cliffs and in the Grapevine Wash. This area south of Lake Mead and east of the community of Meadview and south to the Diamond Bar Ranch area should be immediately declared a wilderness area. It is difficult to believe that any consideration could be given to any activity which would deface and spoil the unique beauty of this area as well as disrupting the ecological aspect of the mesa." Of course, that would speak to the -- what could happen with the amount of dust, blasting, of possible chemical use, anything which goes on with mining activity; that's my own observation there.

Now, I'll just read one more. "I have been informed of a proposition to put a mining operation at the north end of the Grand Wash and Grapevine Cliffs overlooking Meadview, Arizona. Why the entire escarpment of the Grand Wash Cliffs and Grapevine Wash has not been declared a wilderness area a long time ago, I'll never understand. The area from the Diamond Bar Ranch along the cliffs northward should be declared a wilderness area without delay. Once

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per se, but I do believe that when mining is done, it should be done in such an area that it doesn't effect our particular wildlife areas, and we do have some in the Black Mountains that are nice wildlife areas, particularly Secret Pass because I've taken Boy Scout Troop 24 down there several times and stayed overnight down inside the pass itself, but I do know on this side of the mountain there's a lot of mining sites, older mining sites just before you go into the Secret Pass entrance, so in my particular deal I'd like to see these areas preserved for our future generations.

Now, I bought my property in Golden Valley in 1958 site unseen; I was in the military back in Ohio. There was no water company out there. In 1965 they formed that water company and I had a home built by Jim Welder Corporation, just a shell. I got transferred over to San Bernardino, spent three and a half years there, and once a month I came over and worked on my house until it was done; so in 1972 when I retired, I had a place to live while I was looking for work and went to work at Duval, but I don't know whether many of you have actually been down to Phoenix lately, or tried to drive the freeways or any of the streets in Phoenix. The number of people down there is astronomical. You take your life in your hands just to drive on those streets.

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To give an example, in 1972 on Highway 68 there, you could stand for several hours before a car would go by. The only easing down there was Laughlin at that time, and it was a small place, but since then since I've been here, I watched that grow down there astronomically. I mean, this really has grown. You have Laughlin; then you have Alley Oop, which is now the Nevada Club. You in the meantime got the Pioneer Club, you got San's Town, you got two more being built, and that increase in population down there is fantastic. You can't even hardly pull off in the Golden Valley on State Route 68 because every minute or so there's a car going by, and they go by in droves.

In other words, what I'm trying to say, our population is increasing in such an astronomical amount here, we'll probably get that smog problem that they've got down in Phoenix.

I moved here to have the elbow room. When I got on to that water system, there was 120 meters out there; we now have over a thousand meters on that water system and three wells; and at the time I went on to the system, there was only one well, so now we have three wells. There's going to be more meters out there.

Golden Valley is growing. I hate to admit it, but it's growing, and I hardly have elbow room any more. I might even have to move to some areas place like Meadview;

wouldn't that be awful? It wouldn't be awful. I've been to Meadview, and it is a nice place up there.

But I think that all of these impacted areas that we've got in this Impact Statement -- I have been with BLM ever since they've started this whole program, going to some of their meetings in Phoenix and the ones here and Flagstaff and various places to attend these and been kept up on it -- they still send me my little booklet, got my name on it, got my address, says Valley Pioneer there, but remember, as president I don't get paid for that water company; it's a nonprofit water company out there. My wife gets paid, her helper gets paid, and two maintenance men get paid, but nobody on that board gets paid. We are not supposed to make a profit. We don't sell stock, we don't sell bonds or anything, but we're continually growing, and as we grow, people are going to move in, and then the next thing you know, if we don't do anything about getting a designated Wilderness Area, they're going to want to trade some of this land off, and there will be houses sitting up on those big hills over there on both sides of the valley. Wouldn't that be terrible? I wouldn't have my nice view I get out there even though I did bought that land site unseen, which is something no one should do, but there is a lot of people all over the world bought property in Mohave County site unseen; Golden Valley was just one example and

there was no water out there then.

But I enjoy it. It's growing, putting in more water mains every day, but I know as a result that's more people that's going to want to try to drive up there, and I'd like to see them walk up there rather than to drive.

Keep our sheep up there. Keep our deer up there. Keep our wildlife such as foxes and the rattlesnakes -- I don't like around the house -- I'd like to see them up there. We do get rattlesnakes down where we're at. I haven't seen too many this year, but I have gotten some in the past, especially the Mohave Green, which is the most dangerous rattlesnake in the United States. It'll kill you in a hurry.

Anyway, I go along with BLM, but I also understand the mining interests because I have worked for that mine for 12 and a half years and I understand that certain areas should be left out for the mining interests, but other than that, I want to see the wilderness area done the way it's stated in here. The only thing I regret is that the actual Burro Springs itself, which I have been down to and have seen, was actually left out shown on the plan; they showed that little insert down there where that Burro Springs was at. That is private property. That was a mining claim, by the way, and there is a spring that flows about a two-inch flow of water year 'round out of that mine

down there for the length of the property. Before it leaves the property, it goes down and it's out of sight, probably comes up down near the Lake Mohave, but that was -- had a fellow down there had a nice orchard at one time, lot of trees down there, hasn't been kept up in a long, long time, but apparently BLM can't trade the guy out of it, so there it sits still, a piece of private property in BLM property, BLM around it.

Nevertheless, I do believe that we should designate all of these areas as much as possible as wilderness Area to preserve it for our kids and keep people from moving up there that shouldn't be up there and have houses sitting up there on top of some of them peaks, and sure enough, they'll try it. I seen it right down when you drive through Phoenix and you go out toward Paradise Valley, see then big hills up in there around Camelback Mountain; they're building them houses all the way around that place. Now they're getting then water mains up there is beyond me unless they're hauling it up in trucks, but they're building them fancy places, half a million dollars. They'll try and build here if they get a chance.

Look at the money they're spending down there at the river building those casinos -- 80 million dollars at a whack; that's what it cost to build that biggest one that looks like a boat down there, 82 million dollars, and they

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stay open 24 hours a day, 365 days a year and do not shut down. And now they're building the new one. Harrah's Club is putting up one and -- what's the name of that -- that motel chain that's putting up that -- Ramada Station; it's going up, so there's two, and I know of seven more that's going to go on down past the river and the money is with Sam's Town and they had the 750 million dollars to build seven hotels, four of them will have casinos, between there and the California border. But that's fine; keep it right there, don't get it up in the hills, but the trouble is people down there's got money that goes down there all the time. They want to keep going slowly, slowly, and the men that got the most money pretty soon's the one sitting right on the top.

MR. MCCLURE: One more minute.

MR. ISAACSON: So, with that, I am in favor, definitely in favor of this wilderness area, as I have been all the way along. I intend to stay on their mailing list so I can keep getting these books.

MR. MCCLURE: Thank you. Yes?

MR. EDWARDS: My name is Ed Edwards -- no imagination in my family. Mr. Isaacson brought up a very good point. I live out in the Black Mountain area; people in Golden Valley move there to get away from clutter and overpopulation.

When I drive out Oatman Road in the evening, I

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cannot see stars anymore from the light that shines from Golden Valley. I drive up to the crest of the Black Mountains; a few years back I'd go up there and sit and look at the stars, and now all you can see is Sam's Town. It's too late for a view from the Black Mountains in that area from Union Pass to Oatman.

When I was a boy, I used to go in a restaurant and sit and drink coffee, listen to a young waitress and her comebacks to these people that come in there, and she used to tell them when she got tired of listening to them, put your money where your mouth is. I've always remembered that, and the things that I'm interested in are the things that I talk about and what I put my money in.

I'm a charter member of the Mohave County Chapter of the Arizona Archeological Society. I've been on some of the local digs and I'm a member of the Mohave County Historical Society and I've led groups out to the Secret Pass area and other historical sites in Mohave County.

A gentleman talked about wildflowers, most beautiful things you see in the spring here. Couple of years ago I took some members of the Historical Society out; they wanted to go through Secret Pass from the west, so I took them out there and we had to stop because the whole hillside was covered with lupines and Golden Poppies.

I've been out there since, and that area is

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destroyed with off-road vehicles' tracks. I went out from the east side with a group, and two weeks later the Archeological Society went out there and somebody had driven from the west to the east with a four-wheel drive through Secret Pass; I understand that's private property, by the way, and there's patented mining claims on the east side there.

Those are two areas where I put my money and my time and my energies, and a third area that I have some unpatented mining claims in the Black Mountain area. I have a one-third interest in the Mother Lode, in case you're interested, Terry. I don't want to see those areas closed to mining, and, as I say, that area from Burns Springs south to Warm Springs, the view is destroyed. You can go up there and you come in through Secret Pass from the east to the west, and if you're sensitive to odors, all you're going to smell is what's coming out of that smokestack down there at the Mohave Generating Station; it's all the way up through Secret Pass almost through Secret Pass, so I want to go on record that I'm opposed and the people that I'm with are opposed to closing off that Mount Nutt area.

Thank you.

MR. MCCLURE: Thank you. Anyone else that would like to speak? Yes, sir?

MR. KENNY: My name is Kevin Kenny. I'm with Cypress

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Minerals. Likewise, I hadn't planned to say anything here this evening, but using somebody else's words, got caught up with the statements, et cetera.

On behalf of myself and hopefully Cypress, we would like to thank the BLM for the good job that Roger did and his staff in examining the areas in Mohave County that constitute areas of good solitude, wilderness quality, and likewise mineral potential.

Myself, I'm a geologist, metallurgical engineer, and I like the desert. I grew up in the east, and you can have it. Arizona is a good place to live, and I think that both the interests of mining and wilderness can be compatible.

Cypress, I would believe, would oppose the blanket inclusion of the areas of the Van Deaman, Mockingbird, Black Mountain, Burns Springs, Mount Nutt, and Warm Springs. Cypress currently has an operation that is just coming into existence down at Copperstone; it is going to be a great boon to that county -- of both Mohave and La Paz. There's going to be a lot of jobs. There's going to be a lot money put into the economy.

In Mohave County the same situation has occurred in the past; there has been quite a few dollars put into the county by mining. We are contributing a small amount at the present time with the operation of the old

Duval Mine, and we feel, as do many geologists, that with increased metallurgical and mining techniques, there is the possibility for a lot of mining -- let's say not a lot of mining -- but selected mining of high-grade properties that can bring revenue to Mohave County. Mohave County is not a county that is very wealthy in terms of the other counties in Arizona, and this type of activity that can bring in revenue and at the same time preserve wilderness qualities can yield a better quality of life for all the persons in Mohave County.

I think in closing out that some of the scars that people mention in mining that were caused by our forefathers could have been avoided; they can be avoided today with intelligent application of environmental constraints, engineering constraints. We don't have to go out and blight the countryside to generate revenue and wealth for Arizona. It can be done in a restrained method, and we must balance our recreational needs with our financial needs so that we can generate a better quality of life for everyone.

Thank you.

MR. MCCLURE: Thank you. Yes, sir?

MR. LAFORGE: My name is Cherlie LaForge, and when you hear about the rights of the miners and people -- off-roaders, recreationists, and all sorts of rights, and

the rights I feel don't get considered very often is the rights of the animals and creatures that live upon that land, and I think it's a greedy, arrogant attitude man takes when he looks toward land and doesn't consider the other creatures.

We always place a value upon -- the miners place a value upon the minerals, others upon the pictures they can take, off-roaders on just the chance to drive their little cars around that you don't get to on the streets, and I feel that the more chance we get to have wilderness, the more it gives nature a chance to carry on the way it was supposed to.

MR. MCCLURE: Thank you. Anyone else? Yes, ma'am?

MS. TENNANT: My name is Gladys Tennant. I live in Meadview, which is truly a beautiful place. I cannot understand why anyone that would ever see this area would not consider it to be prime wilderness property. It is without a doubt the most beautiful area in the country.

That is all, sir.

MR. MCCLURE: Thank you. Anyone else?

MR. TENNANT: May I ask a question of you or is that proper now?

MR. MCCLURE: You may, and I'll either answer or tell you I have to see you later.

MR. TENNANT: Is there a representative of the

particular mining interest that has its eye on the Grapevine area in the audience, and if there is, can they tell us anything about what's on their mind?

MR. MCCLURE: You'll have to hold that type of question until after we close the formal part of this, which is just pretty close unless there is somebody else that would like to speak, and then we can handle that type of thing.

If there is no one else, I would like to close the formal part of this hearing. I want to thank all of you for your attendance and all those who spoke. Remember that the record is open until January 8, 1988, and so we would encourage you to get in written comments to us so that we can consider those.

Also this evening there are going to be a number of BLM people that are staying around to try to answer questions like have just been asked or anything that you have regarding wilderness, and we'll be willing to stay as long as you wish to do that.

Do you have anything else, Roger?

MR. TAYLOR: No.

MR. MCCLURE: Okay. This hearing is closed, and thank you very much.

(The hearing was concluded at 9:20 p.m.)

Certificate of Reporter

I, Debra M. Henson, Certified Shorthand Reporter in the State of Arizona, in and for the County of Mohave, do hereby certify that I made a shorthand record of the proceedings had in the foregoing entitled cause at the time and place hereinbefore stated;

That said record is full, true, and accurate;

That the same was thereafter transcribed under my direction; and

That the foregoing typewritten pages constitute a full, true, and accurate transcript of said record, all to the best of my knowledge and ability.

Dated this 8th day of December, 1987.

Debra M. Henson

Debra M. Henson, C.S.R.

THE DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL IMPACT STATEMENT

PROPOSED WILDERNESS PROGRAM

for the

ARIZONA MOHAVE WILDERNESS AREAS

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Public Hearing
December 2, 1987
7:00 P.M.

Maricopa Board of Supervisors
Auditorium
205 West Jefferson
Phoenix, Arizona

BE IT REMEMBERED that heretofore on the 2nd day of December 1987, commencing at 7:05 p.m., at the Maricopa Board of Supervisors Auditorium, 205 West Jefferson, Phoenix, Arizona, the Public Hearing on the Bureau of Land Management Arizona Mohave Draft Wilderness Environmental Impact Statement was held.

Mr. G. William Lamb, hearing officer, and Mr. William T. Childress presided.

MR. LAMB: Ladies and gentlemen, I would like to call this hearing to order now. We are a few minutes past time, so if you would come and sit down we will get started.

I would like to introduce myself. I'm Bill Lamb, the district manager for the Arizona Strip BLM District, and I have been appointed by our state director Dean Bibles to conduct this public hearing on the authority of the Secretary of Interior concerning wilderness study of the Arizona Mohave Study Area.

I think most of you probably signed in. If you haven't, maybe you would take a few moments and sign in on the sheet and indicate whether or not you would like to make a comment. And I will ask you that in a few minutes so I can have that.

Seated down in front of me is Annette Satterlee and she will be preparing a verbatim transcript of everything that is said. So if you would like to have a copy of that transcript, you can contact her after the meeting and you can make arrangements with her.

This public hearing is being held to obtain information relating to 15 wilderness study areas which have been studied by the Bureau of

Land Management. A draft environmental impact statement on these areas has been published and is available, I think, in the back of the room there. You can pick one up if you don't have one.

The purpose of this hearing centers around two primary issues. First, are these wilderness study areas suitable or not suitable for designation as wilderness; and second, is the draft environmental impact statement adequate. And your comments on those particular issues will be appreciated and will be helpful to us in making decisions.

In arranging for this public hearing, notices were sent to United States Senators DeConcini and McCain of Arizona; Bingaman and Domenici of New Mexico; and to representatives Stump, Udall, Rhodes, Kyl and Kolbe of Arizona. Additional notices were sent to Governor Mecham of Arizona and Governor Carruthers of New Mexico and other elected officials. Notices have also been sent to federal, state and local government agencies and to organizations and individuals known to be interested in this wilderness study.

This hearing is not considered to be a debate or a trial or to answer any particular

1 questions. It is an advisory hearing. And all
2 interested persons may present statements either
3 written or oral or both or other information
4 pertinent to the wilderness study we are
5 considering here today.
6 There will be no cross-examination
7 from the audience. If anyone fails to understand
8 something, we can clarify that if you will direct
9 that question to me. This may seem a bit formal,
10 but it's really the only way that we can give
11 everyone a fair and reasonable opportunity to
12 present his or her views.
13 Let's see. We don't have too many
14 people here tonight, so I will not set a limit on
15 the time. But when you come up, if you could come
16 up and give your name, and if it's a name that is
17 hard to spell, we would appreciate it if maybe you
18 could spell it for Annette here so that she can
19 get it correct in the transcript. And if you
20 aren't able to talk about the entire written
21 statement that you would like to give, then you
22 can leave that with us and we will make sure that
23 it is in the transcript and will be fully
24 considered by the district when they review the
25 information.

1 After the record closes on January 8th,
2 1988, there will be a thorough review of the draft
3 environmental impact statement. Your comments
4 will be considered by the state director in making
5 his recommendations to the BLM director in
6 Washington who must make a recommendation to the
7 Secretary of Interior. After due consideration,
8 the secretary will transmit his recommendation to
9 the president. The president in turn will
10 transmit his recommendation to Congress. After
11 appropriate consideration, which will include
12 hearings, the Congress will accept, reject, or
13 modify the president's proposal. Only Congress
14 can designate an area as wilderness and only
15 Congress can release BLM study areas from its
16 status.
17 As you can see, the BLM preliminary
18 proposal before you here today will undergo
19 comprehensive review. And this public hearing and
20 your views are a very important part of that
21 process.
22 I would like to now call upon Bill
23 Childress, the area manager for the Lower
24 Gila Resource Area in the Phoenix district with
25 the BLM, to explain the preliminary finding of the

1 The record will stay open, the comment
2 period will stay open until January 8th, 1988.
3 And if you have any written comments that you
4 would like to make after this time and before
5 January 8th, you can write your comments to the
6 Team Leader, Bureau of Land Management, 2015 West
7 Deer Valley Road, Phoenix, Arizona, 85027.
8 Now, the Federal Land Policy
9 Management Act of 1976, which is commonly known as
10 FLPMA, directed the BLM to conduct the wilderness
11 study of certain public lands. The wilderness
12 study areas under consideration today were
13 identified by the BLM under criteria set forth in
14 Section 2C of the Wilderness Act.
15 FLPMA directed the BLM to review such
16 areas and prepare recommendations as to whether
17 the lands were suitable or not suitable as
18 designations for wilderness. The law requires
19 that a public hearing be held as part of this
20 study and that's why we are here this evening.
21 BLM has completed its first part of its wilderness
22 study and it has published a draft environmental
23 impact statement containing its preliminary
24 finding. Now it is the public's opportunity to
25 comment on that study.

1 wilderness study to you. But first, before I turn
2 that time over to him, I would like to explain
3 again that this is not an adversarial proceeding.
4 If you want to ask a question in order to clarify
5 a certain point, please feel free to do so.
6 Direct your question to me and I will determine
7 whether it is important. I might mention, though,
8 that the BLM people will be here after the meeting.
9 So if you have some particular questions that you
10 would like to direct to them, I'm sure they would
11 be happy to answer them after the hearing.
12 With that I will turn the time now
13 over to Bill.
14 MR. CHILDRESS: Good evening. On October
15 1st, 1987, the Bureau of Land Management released
16 its draft wilderness environmental impact
17 statement for the Arizona Mohave Study Areas.
18 This document assesses the environmental
19 consequences of managing 15 wilderness study areas
20 for either wilderness or nonwilderness.
21 The draft wilderness environmental
22 impact statement is part of the study phase in the
23 BLM's wilderness review process. Now, this
24 process is mandated through Section 603 of the
25 Federal Land Policy Management Act of 1976

consists of three phases: Inventory, study, and reporting.

The inventory phase identifies areas with wilderness characteristics as defined in the Wilderness Act of 1964 and establishes them as wilderness study areas. This phase was initiated in November 1978 and was completed November 1980. The 15 wilderness study areas in this draft environmental impact statement were dropped from wilderness review by a decision by the Secretary of the Interior in 1982. A court decision in 1985 restored all 15 wilderness study areas to the wilderness review process. These 15 wilderness study areas are the last to be studied in Arizona by the Bureau of Land Management.

The study phase determines which wilderness study areas will be recommended as suitable for wilderness designation or which will not. In this draft environmental impact statement, we have preliminarily analyzed 276,464 acres for designation or non-designation of wilderness.

The reporting phase begins after completion of the wilderness environmental impact statement. A Wilderness Study Report will be prepared to address the study and to make

wilderness recommendations. This report will summarize the environmental impact statement and the results of public participation.

The 15 wilderness study areas are located in five Arizona counties and one county in New Mexico. Of the wilderness study areas, 10 are in northwestern Mohave County near Kingman; one is in southern Yavapai County north of Lake Pleasant; one is in Maricopa County southwest of Phoenix; one is in Pima County northwest of Tucson; one in in Greenlee County southeast of Clifton; and one is in Grant County, New Mexico, also southwest of Clifton.

These areas recommended as suitable for wilderness designation in the draft environmental impact statement include portions of the following wilderness study areas: Black Mountains North, Burnt Spring, Mount Tipton, Mount Nutt, Warm Springs, all of which are in the Kingman area; and all of the Sierra Estrella WSA near Phoenix. These areas cover approximately 202,000 acres. The remaining portions of the five wilderness study areas and all of nine wilderness study areas totaling approximately 74,000 acres are recommended to be returned to multiple use

management.

The draft environmental impact statement was prepared to ensure that environmental impacts are considered in the study phase along with economic and other considerations. The information in this document has been gathered from public meetings, wilderness inventory records, and other resources including federal, state and local agencies and private organizations and interest groups.

Alternatives assessed in this draft environmental impact statement include "all wilderness" and "no wilderness" for each wilderness study area; "partial wilderness alternatives" for five wilderness study areas; and "enhanced wilderness alternative" for two wilderness study areas.

A 90-day public review period is presently under way for the draft wilderness environmental impact statement. This review period will end January 8th, 1988. Comments on the adequacy of the draft environmental impact statement that are received during this review period will be used in the later decision making process and included in the final wilderness

environmental impact statement.

As part of the public review process, public meetings on the draft environmental statement have been held in Clifton, November 17th, 1987; Silver City, New Mexico on November 18th, 1987; and Kingman on December 1st, 1987. This meeting is the last one.

Members of the public are encouraged to review the draft environmental impact statement and submit written comments or to attend hearings like this to submit oral comments. Thank you.

Mr. Lamb.

MR. LAMB: Now, we don't have a large number of people here tonight, but how many would like to make statements? Show me by the raise of hands. Okay.

Now, I will call upon you from the front toward the back. And I won't set a time limit this time because we don't have that many people here, but watch me closely. And if I raise my hand, then would you take just about a minute longer to conclude your comments and we can go on with the next person. If you do have a written statement, if you could leave a copy with our reporter here we would appreciate that.

Looks like we first have a George Byers. And George, you are the first here, so if you would come up.

MR. BYERS: Thank you, Bill. And it's good to see you again. I enjoy coming to wilderness hearings because I get to see a lot of people I know.

I'm George Byers. I'm director of public affairs for Santa Fe Pacific Railroad Company which, despite its name, is not a railroad but a land and mineral management company. And in case anybody says it, we did buy the land. We earned it and we own it. It wasn't given to us. And we own 47,000 acres of mineral estates in six of the WSAs that this EIS covers and those are Grand Wash Cliffs, Mount Tipton, Black Mountains North, Burn Springs, Mount Nutt and Warm Springs.

I would like to just kind of make an editorial comment before I go to a statement on this draft. Out there on the table you have a number of draft or final EISs on wilderness in Arizona and they have recommended I don't know how many hundreds of thousands of acres for wilderness.

But in my opinion, and it's only my opinion, many of the recommendations are redundant

analyses and there is insufficient information in the EISs, this one in particular, on the effects of wilderness designation of existing rights such as ours.

Also, we have worked diligently with you, as you know, about exchanges. And I was encouraged this morning by a phone call I had from Henri Bisson. And apparently we are going to get a letter and a proposal on exchange from the BLM in a couple weeks.

Nevertheless, we believe the EIS

P-1 should provide some basis and fundamental information that would help the Congress make an informed judgment on wilderness designation.

P-2 Although I believe in this EIS the mineral values were probably treated better than any of the others, we still would ask that there should be a rating of the potential for mineral development on our lands within these WSAs just as there is for the federal lands in the WSAs. The EIS should assess impacts of potential development of our minerals on wilderness values and vice versa.

And finally, the EIS should analyze how mineral estates are going to be acquired. Are they going to be acquired through exchange or

and they don't truly represent the recommendations of those areas which are truly special or truly unique. And it may be because these EISs were prepared by different staffs at different times, different offices and so forth, and not really under one central place. And I think a sorting out ought to occur. Many of these areas have in holdings such as ours which affect manageability. Many have significant mineral potential. Perhaps this sorting out will occur and the best will float to the top when the bill being prepared by the Congressional delegation is considered.

I would like to give you some comments now on the draft and what we view as deficiencies in it. First, we believe the draft ignores the manageability problems which are posed to wilderness protection and management by the BLM because of our mineral holdings. This is a fact which is recognized by the Department of Interior, by BLM's Washington office, by the general accounting office in two recent reports. And we are therefore concerned that as the Congressional delegation prepares its bill, we have heard one is already drafted, but as this is considered, that the presence of our lands is receiving deficient

through purchase? You have so many EISs, so many wilderness recommendations which contain our lands. We are reaching a point, we think, where there may not be enough in the pot to exchange with us. So we believe this should be assessed as well, the alternatives of either acquiring or not acquiring our lands; the expense of it, if it's going to be by purchase and how the mechanics of how exchanges will take place.

If this EIS, by ignoring ownership and the mechanics of exchanges, is treating our ownership as a non-issue as we think was done in the Upper Sonoran EIS, then BLM is going to be guilty of making a seriously erroneous reading of the District Court's decision in 1985. Judge Earlton's opinion properly concluded that Santa Fe Pacific's reserve wilderness rights could not legally be impaired by wilderness designation. And the decision also identified exchanges by criminal means by which our rights could be protected and by which wilderness values also could be protected.

So we believe that those deficiencies ought to be corrected. We are, as I told Henri this morning and Dean yesterday also, we reiterate

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we are ready and willing and we hope able to do exchanges with BLM in order to eliminate management problems so that in selected WSAs after informed deliberation an appropriate number of those WSAs which contain truly special wilderness values can qualify for wilderness designation by Congress.

In those WSAs covered in this EIS, we will be willing to exchange our mineral estates in Grand Wash Cliffs, Mount Tipton, Mount Nutt, and -- I'm confused. Burns Spring, I believe. Excuse me.

Is Burns Spring the large one to the south or in that Warm Springs?

We will be willing to exchange out of Warm Springs also. We are not going to be willing to exchange out of Burns Spring or Black Mountains North because we believe the mineral potential and values on our own lands there are far too high to justify an exchange. And we believe those two WSAs ought to be returned to that multiple use as quickly as possible.

The government has long recognized that the presence of our lands in special management areas is a management problem. And the government has come to us a number of times in

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California, Arizona, and New Mexico during the last 85 or 87 years so that we can conduct exchanges so that lands can be set aside for a variety of worthy public purposes. We have conducted exchanges in Arizona to help set aside the Coconino National Forest, the Havasu National Wildlife Refuge, the Petrified Forest National Park and the Grand Canyon National Park. And the one at the Grand Canyon involved well over 300,000 acres.

Affiliates have conducted exchanges in California recently to protect the habitat of the Coachella Valley fringe-toed lizard and to set aside lands in the East Mohave National Scenic Area. Just this year we have done a small exchange here in Arizona at the Petrified Forest, a 5,000-acre exchange to add lands to Chaco National Historic Park in New Mexico, and we are about to get the mechanism through the Congress to exchange 15,000 acres in four wilderness areas to be added to the El Malpais National Monument.

And we look forward, Henri, to doing this here. And I believe that when we get your letter in two weeks we will be well on our way to doing that. We want to be constructive but we

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want to engage in exchanges that will be fair to the public, fair to you, and also fair to Santa Fe Pacific.

These comments will be followed with a letter before the end of your comment period specifically with regard to the mineral potential in each of the six WSAs. Please accept my comments not as criticisms, severe ones, but we do believe the EIS should assess these deficiencies.

We are willing to do an exchange, but we believe nevertheless that Congress has got to have that fundamental information so that it can make its informed decision. And we don't think an informed decision can be made right now with the information as it is. Thank you.

MR. LAMB: Thank you, George.

Since I do have a list in front of me, maybe I will just follow down the list here. Next on the list is Tim Flood. So Tim, if you would come up, please.

MR. FLOOD: Good evening, Mr. Lamb, Mr. Childress.

My name is Tim Flood, F-L-O-O-D. I would like to address my comments to the Ragged

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Top wilderness study area which is about 33 miles from Tucson. I believe that you have done a very good job of describing the area in your draft EIS. You describe very well the resources, both wilderness and other resources. The area has very many wilderness qualities that I think are highly valuable and warrant that the area should be declared wilderness.

The wilderness resources appear to be equal in value to those that are found in the Saguaro National Monument and the Sonoran Desert Museum. As the city of Tucson grows, the wilderness value in the Ragged Top area will become more and more important. The BLM has plenty of surrounding lands around the Ragged Top area. These lands paradoxically have protected the Ragged Top area from degradation. The Silver Bell Mine and other mines to the west side have prevented ORV and other vehicular intrusions into the Ragged Tops and continue to protect the basin between the Silver Bell Mountains and Ragged Top Mountain itself.

I would recommend that the BLM consider making the Ragged Top area wilderness and then also expanding the wilderness area to include

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the Silver Bell Mountains. That is all of my comments.

MR. LAMB: Thank you, Mr. Flood.

If I happen to say your name wrong when I call you up, please correct it, will you, when you come up.

The next person on the listing is Jane Cole.

MS. COLE: I'm Jane Cole, C-O-L-E. I'm at one of these meetings for the first time, but I'm a nonnative resident in the Bradshaw Mountains and I own a cabin in the Horsethief Basin area and have many times enjoyed hiking and walking and enjoying the solitude of the Castle Creek wilderness area.

This area is right on the edge of one of the areas being considered in this hearing which is the South Bradshaw East area. It's only 640 acres. It could be overlooked and I feel that in this report it was sort of overlooked. No particular plants, no particular animal life was specified in the report. And yet, with the Castle Creek wilderness area right there, we know they are there. We know there are lots of very special plants, lots of low-lying plants that offer cover

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for a lot of little animals that have not been looked at carefully.

I think the thing that worries me is up in Horsethief Basin there are areas where off-road vehicles are allowed and further down the road on the way to I-17 there are quite a few mining activities going on so that we do need very much to preserve wilderness area as well. And of course that area near Crown King has a historic background of heavy mining. It's interesting to watch some of that land recover. And I hate to see some of it put back into that kind of use.

So I would hope that first study would be made of this 640 acres to see, there's also the chance of putting a road in there that will add to the noise going up the side of the mountains and I would hope that further study would be made of the area and further consideration given to making it wilderness again.

MR. LAMB: Thank you, Ms. Cole.

The next name I have is Bobbie Holaday.

MS. HOLADAY: Gentlemen. Bobbie Holaday, H-O-L-A-D-A-Y.

And I would like to commend the Bureau for doing an excellent job on this EIS. I

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consider it one of your masterpieces. I was very glad to see that you recognized the value of some of these splendid areas. And I'm sure that a lot of us and a lot of people in the future are going to thank you for preserving such fine lands.

I would like to mention, the Black Mountains North, Mount Tipton, which I have hiked in, I would like to recommend, I understand there are three sections in the Mount Tipton area that are going to be exchanged or are being exchanged that aren't discussed in this EIS. And I would like to recommend that those be added to the final version of Mount Tipton.

I would like to recommend that you take another look at the Grand Wash Cliffs. Now, I notice you are not recommending that for wilderness. I would like to see this segment of the Grand Wash Cliffs included in the wilderness designation because this significant escarpment, this would be the only section that was preserved as wilderness. And I think it would be a mistake not to recognize the value of that scenic area.

I was happy to see Mount Nutt in there. That's a wonderful place. I hiked up there last spring and you are certainly to be commended for

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including that. I would like to see you follow your enhanced wilderness boundaries. It's not very much more than you recommended but take another look.

Warm Springs is a marvelous area that I'm very happy to see you including. Again, please take another look at the boundaries. I know it's necessary to keep them manageable, but that is a particularly fine area. I understand it's very heavy with bighorn sheep and that they do very nicely there.

Jane Cole mentioned the South Bradshaws. I don't believe the adopter for the South Bradshaws is here tonight. I'd like to put a plug in for the area because of the fact I have friends who have hiked there considerably and they have found some vegetative types particularly of the herbaceous nature that are in that area. So I'm sure Jane knows what she's talking about. I would like to see that area included.

Happy to see you are going to include the Sierra Estrellas. I'm sure Phoenix needs that area as a wilderness area with the population as it is and expanding.

And also Ragged Top. There is no

question as to its wilderness qualities. I don't know the reason for its not being included, but I would go along with Dr. Tim's recommendation on the expanded Ragged Top wilderness area.

Thank you very much.

MR. LAMB: Thank you, Bobbie.

I have one other who has indicated that they want to comment tonight and that is Gabriel Sinsli.

MR. SINSLI: Good evening. My name is Gabriel Sinsli, S-I-N-S-L-I. I got about 25 different versions of it in the mail so far.

I'm very happy to be able to be here tonight to comment on this very fine piece of work that the BLM has done on this EIS. I would like to make two general comments about what, one general comment about wilderness. It occurred to me the other day as I was leading a hike in the Superstitions, I'm here, by the way, representing the Glendale Hiking Club.

I was leading a hike in the Superstitions the day after we had this huge storm in the valley and I thought for sure we would be the only ones there because it looked like it might rain again. Well, lo and behold, the place

was just packed with people. And the party we were in were about 12 people. Of course I stopped for a potty break at McDonalds in Apache Junction and then on the way back to stop again for some, funny name, well, something event, you know, also in Apache Junction.

And you, now, imagine we are not the only ones doing this. And I am quite sure Apache Junction benefits economically, extremely well, from the presence of the Superstition wilderness area. And I am also sure that all wilderness areas in this state, present and future, will add to the economic well-being of the state.

The other general comment I had was on this burro animal capture and reducing the herd numbers. I'm all for it. I occasionally do believe that non-native species such as the burro be either extricated or reduced in these desert areas.

Now, I have some direct comments on this Arizona Mohave. I do appreciate very much the work that was done on the proposal that was made on the Mount Tipton. We led, or I led a Glendale Hiking Club hike there and I am very, very impressed by the fact that you have proposed

the area to be larger than the manageable smaller-sized WSA you have included in your proposal areas that have been treated with the state in the meantime. It's a very, very good position you take.

I also would like to say that Grand Wash Cliffs is an area that is very deserving of wilderness protection. We heard it deceiving from Mr. Byers this evening that Santa Fe is willing to trade out the subsurface mineral rights there. So that's one more, one less impediment along the way to recommending that as well. I have seen pictures, unfortunately I have not been there yet, pictures of the Grand Wash Cliffs there with Grand Wash in the background and some prehistoric items in the foreground. I also saw a picture of a puppy, or I don't know what you call it, two bobcat pupsies in a yucca tree. It was a very moving picture.

The other comment I have is on two small areas in the southeast of our state and in New Mexico, Hoverrocker and Apache Box. It has occurred to me and to many other people that the wildlife in the state is very heavily dependent on riparian habitat. And we have managed over the

last 100 years to alter or destroy 90 percent of our riparian habitat in the state. It is extremely important for benefit of people who like to enjoy watching animals and for benefit of people who like to hunt them that we keep riparian areas as the few remaining riparian areas as well protected as possible. Hoverrocker and Apache Box both have riparian areas. The Apache Box has a stream that flows all year around. And I would like to add that the Nature Conservancy just spent three-quarters of $1 million to acquire five miles of a river in Wickenburg, the Hassayampa River. Well, that's a lot of money for riparian habitat. They believe that that's very, very important here in the state. And we have these areas luckily in our ship, being us the public, BLM, and I highly recommend those two areas to be protected as wilderness.

One more comment on the South Bradshaw Seat. I also think that it ought to be just included in the forest service area Castle Creek wilderness.

Final comment about Ragged Top. We had, the Game and Fish Department out on a weekend seminar on the upper Sonoran desert down by

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1 Picacho Peak and there was a botanist there. Her
2 last name escapes me. She is the wife of Mr.
3 Hughes who works for the Botanical Garden. Karen
4 Reichart, yes.
5 And she mentioned just within the
6 boundaries of Rugged Top wilderness study area
7 there are some individual plants of the Tucsonae
8 globaberry, which is a federally endangered plant.
9 And we also heard that that area is very good
10 habitat for the Harris hawk. The Harris hawk is a
11 very special animal that seems to enjoy quite a
12 bit the area north of Tucson on both sides of the
13 freeway because of the Sonoran desert, the rich
14 Sonoran desert there which provides a lot of
15 rodents and a lot of prey.
16 The area, however, which is on the
17 eastern side of the freeway between the Picacho
18 mountains and Oracle, basically, apparently will
19 be developed quite heavily in the future. The
20 land bureau there are a lot of private, a lot of
21 state and a little bit of BLM. BLM is trying to
22 trade out of that for nonagreability purposes and
23 the Harris hawk will probably not be so prevalent
24 on the eastern side of that freeway. We need to
25 define, then, the need to provide some quality

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1 Sonoran desert habitat for the Harris hawk. And
2 Rugged Top would be on the west side of the
3 freeway where that could be taken care of.
4 Thank you very much. Appreciate it.
5 MR. LAMB: Thank you, Cabrini. Appreciate
6 that.
7 Are there any others? This is all
8 that I have on the list. Are there any others
9 that would like to comment? Would you come down,
10 please.
11 MR. NORTON: My name is Jim Norton. I'm
12 the southwest regional director for The Wilderness
13 Society. I am based here in Phoenix and cover the
14 states of Arizona and New Mexico for the Society.
15 I appreciate the opportunity to be
16 here this evening and it gives me great pleasure
17 to commend the BLM for a very fine wilderness
18 draft environmental impact statement that you are
19 receiving comment on here this evening. It's been
20 wonderful to me to observe the steady improvement
21 over the years in the BLM's recommendations
22 starting with the very first draft EIS, which was
23 the Arizona Strip. The agency recommended then
24 only 14 percent of the wilderness study areas.
25 There has been very steady improvement in those

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1 recommendations in subsequent environmental impact
2 statements culminating with, I think, the very
3 best in the Arizona Mohave here where we see about,
4 if my math is correct, 74 percent of the WSAs
5 proposed suitable for wilderness. I think that's
6 really outstanding that the agency has recognized
7 that there were some serious problems in the
8 earlier documents and has tried to correct those
9 where possible.
10 It's particularly amazing to me that
11 this particular document includes almost
12 three-quarters of the WSAs suitable because each
13 of these areas were dropped from study by Interior
14 Secretary James Watt. The fact that the Interior
15 Secretary dropped them and then later Secretary
16 Watt didn't even think they were worth studying
17 and then later the agency comes forward and
18 recommends three-quarters of them as wilderness I
19 think really said a lot not only about how far off
20 track Watt was but also about how the agency is
21 responding to the realities that are out there.
22 I think there are at least four
23 reasons that the recommendations have improved so
24 much. One, of course, is that Watt is now gone,
25 thank God. Second is that there really has been a

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1 huge public outcry against the inadequate earlier
2 wilderness recommendations in some of the earlier
3 environmental impact statements. I think the
4 agency is justified in recognizing that citizens
5 in Arizona and across the country overwhelmingly
6 want more wilderness. They value wilderness and
7 feel that this is really one of our last
8 opportunities to save the pristine areas that are
9 left. The third factor is that Congress, going
10 back to that first draft EIS in the Arizona Strip,
11 designated more than twice the acreage than the
12 BLM had recommended. So I think it demonstrates
13 as well that Congress was certainly not going to
14 feel confined to recommendations by the agency
15 that were inadequate and didn't adequately address
16 the issues. And then fourth, and perhaps this is
17 the most important reason that the Arizona Mohave
18 EIS has shown so much improvement, and that is the
19 high quality of the BLM staff people working on
20 the document. I know that there has been a lot of
21 work that's gone into it, a lot of scientific
22 study, a lot of analysis of mineral values, a lot
23 of analysis of the recreation resource. They have
24 looked carefully at lands to be acquired and as a
25 result it really shows in the document. You don't

find a lot of phony arguments being used to drop areas from wilderness consideration in this EIS and I think the BLM is to be commended for that.

I would like to talk a little bit about some specific areas. Despite the improvement in the document, there still are some flaws in some of the recommendations and I would like to go over some of those. Before I do that, I wanted to first talk a little bit about the values in general that are found in the wilderness study areas depicted in this environmental impact statement. I couldn't disagree more with a statement made earlier by Mr. Byers that the BLM's recommendations are redundant and that they are recommending some areas that are not truly special. I think all these areas are truly special. And, in fact, the agency made that determination years ago in the inventory process when they were analyzing which areas to consider as WSAs.

All the WSAs are truly outstanding areas. In fact, the criterion that they had to meet in order to become a WSA guarantees that. They meet the criteria outlined in the Wilderness Act that include their having outstanding opportunities for primitive recreation or solitude;

that they are natural, where the works of man are substantially unnoticeable; and that are 5,000 acres or greater in size or can stand alone as a wilderness area or with adjacent roadless areas.

So each of the WSAs already meets these criteria and they are all outstanding areas. So really the burden is on the other side to prove that even though an area has these outstanding values, there is something else that's more important such as mineral development or off-road vehicle use or timber harvesting, although that's not an issue in the BLM WSAs. And that's a pretty tough standard to meet in most cases.

In addition to having those three necessary criteria for wilderness, the areas in the Arizona Mohave also have outstanding archeology. There are many areas that scientists haven't even begun to study or learn from. Incidentally, the archeological resource is protected by wilderness establishment. It helps to prevent looting and it helps to prevent easier access, particularly motorized access, to sites that might be looted.

Many of the areas if not all of them have outstanding recreation opportunities. That's

a resource that's growing as fast or faster than our population here in Arizona. And passive recreation, hiking, camping, bird watching and that sort of thing is growing even faster than the rate of population growth or the rate of recreation growth. So that's an important thing that we should be continuing to take a close look at as we move into the future.

Many of the areas have important wildlife value, particularly desert bighorn sheep habitat. Our desert bighorn sheep populations are only a fraction of what they used to be and what they should be in the future. And many of these proposed areas could help to protect important bighorn habitat by being designated as wilderness.

There are also many areas that include riparian resources which, of course, are so important to us here in the Southwest. There aren't a lot in this particular EIS, there aren't a lot of large free-flowing stream segments, but there are a number of springs and washes and other areas with riparian value that should be protected.

And then finally there are many scientific values in some of these areas that we may not have even discovered yet, rare plants and

animals, for example, that might have medicinal uses or other sorts of things.

So these really are outstanding areas. I think the facts point to that. I think the Congressional criteria that have been set up are good and I think that the agency's process of identifying these areas as WSAs does ensure that they really are outstanding and they don't represent a large proportion of the state, either. Even if all 2 million acres of WSAs are designated, that's still only a couple percentages of the state and the vast majority of the BLM lands will still be open to mineral development and off-road vehicles and other sorts of things.

So now, moving quickly to some of the improvements that could be made in this already good document -- am I taking too much time here?

MR. LAMB: No, go ahead.

MR. NORTON: I can talk all night.

MR. LAMB: No, we will stop you if you talk all night.

MR. NORTON: I just have a few specific comments that I wanted to make about specific areas.

First, Sacred Tom. The Flood and

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Bobbie Holaday already referred to this area and I will echo their comments. It is a very important area and it should be recommended and also should be enlarged. The WSA itself should be enlarged as Tim mentioned to include the Silver Bell Mountains as well. I'm particularly concerned about the Ragged Top area because of its proximity to Phoenix and Tucson, very rapidly growing metropolitan areas. In fact, I think Phoenix is the very fastest growing city in the country right now.

The BLM in other documents has recommended against many other important areas near Phoenix. And when you look at the picture cumulatively, the Phoenix area particularly is getting the short end of the stick. Not only is Ragged Top non-suitable, but also north and south Maricopa, Butterfield's Stage, Hell's Canyon, Hassayampa, the Picacho Mountains are all proposed non-suitable. These are all within a day's drive or a day hike from Phoenix. And I really think we need to be taking a little closer look at what opportunities we have in the Phoenix area before it's too late. Ragged Top is one that certainly ought to be looked at carefully for that reason.

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Mount Davis. The Wilderness Society recommends that this area be designated wilderness and also enlarged to include some adjacent sections that have been recently picked up by the BLM from the state. This is a very unique bajada area, pristine bajada that is not generally found in the state in as pristine condition as it is here in Mount Davis. It's not your typical alpine peak in the wilderness system. But we need to preserve all types of ecosystems, ecotypes, I should say, including this type of bajada.

The Granville area is a very important one. As I understand it, there were quite a few comments last night on in Kingman about this area so I will be brief. I do agree, though, with the general sentiment as I understand it up there that this area should be protected and, in fact, should be enlarged to include some recently acquired land.

Mount Tipton. I would like to commend BLM for first of all acquiring the adjacent state land and then second being so bold as to recommend it as wilderness. I think that's a very important and good move.

Grand Wash Cliffs, again I would like to echo the comments of Bobbie Holaday and others

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that this is a beautiful scenic area and certainly should be designated wilderness. And also this is an area that the BLM ought to take a close look at, whether some of the recently acquired land could be added to the wilderness. In fact, it may be possible to expand quite considerably there the Grand Wash Cliffs as well.

Black Mountains North and Burro Spring, the boundary proposed by the agency cuts out more land than is necessary in my opinion for the Portland Mine. The boundary there could come quite a bit closer to the existing mine while still excluding the very highly mineralized areas right near the mine that the miners may choose to enter into. I think it would be unrealistic in this particular case to go all the way up to the WSA boundary near the Portland Mine because it is an active mine and obviously that demonstrates that there may be some highly mineralized areas nearby that would be developed whether or not this area is wilderness. So I think it's prudent to make an exclusion there from the WSA. But the agency's recommendations there go beyond what is necessary.

Warm Springs generally is a good

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recommendation in my opinion, but the agency and Congress ought to take a close look at adding the McNeffy Butte area. There may be a few other boundary adjustments that might be prudent as well in Warm Springs.

And then finally Haverucker. In my opinion that's an area that should be suitable. It's adjacent to the Hell Hole roadless area in Arizona and the Hell Hole newly designated wilderness study area in New Mexico. And these three areas combined together make it a truly outstanding wilderness resource that really deserves wilderness designation.

So I appreciate the opportunity again to make these comments and again commend the BLM for a very fine document. Thank you.

MR. LAMB: Thank you, Jim.

Are there others that would like to comment this evening?

If not, on behalf of the BLM and especially the Phoenix district, I would like to thank you for taking time out of your evening to come and spend with us and giving us your comments. As you know, these are very important for us to be able to make decisions especially on your behalf.

So with that, again, thanks.

(Hearing concluded at 5:05 p.m.)

C E R T I F I C A T E

BE IT REMEMBERED that heretofore, on the 2nd day of December 1987 at the time and place aforesaid, the foregoing proceedings were stenographically recorded by me or under my direction into the foregoing pages of printed matter, and that the same contain a full, true and accurate transcription of said proceedings all to the best of my skill and ability.

DATED at Phoenix, Arizona, this 8th day of December 1987.

Court Reporter

Silver City -

S-1 The two WSAs discussed here are both under 5,000 acres, Apache Box 932 acres and Hoverrocker 2,791 acres and only qualify as WSAs because they are adjacent to two Forest Service WSAs over 5,000 acres. The two Forest Service WSAs were recommended as not suitable for wilderness designation by the Forest Service last year. Their recommendation did not hinge on ours being suitable or not suitable.

Kingman -

K-1 The wilderness regulations (43 CFR 8560.5) state that: a) "Any person who knowingly and willingly violates the regulations in 43 CFR 8560.1-2 is subject to arrest, conviction and punishment by a fine of not more than $1,000 or imprisonment for not more than 12 months or both." b) "At the request of the Secretary of the Interior, the Attorney General may instigate a civil action in any United States District Court for an injunction or other appropriate order to prevent any person from utilizing public lands in violation of the regulation of this part."

K-2 The Lake Mead Recreation Area lands adjacent to the Mount Davis WSA have not been designated wilderness. They are identified as lands that meet the wilderness criteria.

K-3 The draft EIS identifies the six BLM WSAs that are adjacent to National Park Service (NPS) lands were identified in the draft EIS on pages 69, 75, 77, 82, 89 and 95. The six WSAs are adjacent to NPS lands that were identified as being potential wilderness or areas meeting the Wilderness Act criteria in Volume II of the Lake Mead National Recreation Area draft General Management Plan. In Volume 1 of the draft plan, the Proposed Action classifies the Lake Mead areas as being Resource Utilization Subzones, areas open to mineral leasing and development.

Phoenix -

P-1 In Chapter 2 of the final EIS a table was developed showing the acreages of federal and private mineral estate in each of the affected WSAs. This table also gives the acreages in the suitable and nonsuitable portion by alternative. Under "Minerals Actions" in Chapter 2, the statement is made that private (non-federal) minerals would be open to exploration and development in designated wilderness areas. The acreages of private and federal minerals are stated in the mineral action description under each alternative.

P-2 The rating of mineral potential for each WSA, as stated in Chapter 3, covers all lands in the WSA including federal and non-federal mineral ownership.

GLOSSARY, REFERENCES, AND INDEX

GLOSSARY

The following abbreviations are used in this EIS. Those abbreviations that represent terms are defined in the glossary.

ADMR	Arizona Department of Mineral Resources
AG&FD	Arizona Game and Fish Department
AMP	allotment management plan
APS	Arizona Public Service Company
AUM	animal unit month
BLM	Bureau of Land Management
BR	Bureau of Reclamation
DEIS	Draft Environmental Impact Statement
EA	environmental assessment
EIS	environmental impact statement
ESA	economic study area
FEIS	Final Environmental Impact Statement
FWS	Fish and Wildlife Service
HMAP	herd management plan
HMP	habitat management plan
IMP	interim management policy
kV	kilovolt
MFP	Management Framework Plan
MSA	management situation analysis
NRQ	National Register Quality
NWPS	National Wilderness Preservation System
ONA	outstanding natural area
ORV	off-road vehicle
PNV	potential natural vegetation
RMP	resource management plan
SMSAs	Standard Metropolitan Statistical Areas
Su	surface mine
Ug	underground mine
USDI	U. S. Department of the Interior
USGS	U.S. Geological Survey
VDY	recreation visitor days use per year
VRM	visual resource management
WSA	wilderness study area
4WD	Four wheel drive vehicle

ACTIVITY PLAN: A more detailed and specific plan or program of actions to implement RMP decisions over some specified time period. Examples include allotment management plan, recreation area management plan and habitat management plan.

ADD-ON: Public lands with wilderness characteristics, but less than 5,000 acres in size, adjacent to other public lands designated as wilderness or being studied for designation.

ADVERSE EFFECT (Cultural Resources): Alteration of the characteristics which contribute to the use(s) determined appropriate for a cultural resource or which qualify a cultural property for the National Register to such a degree that the appropriate use(s) are diminished or precluded or the cultural property is disqualified from National Register eligibility. Criteria in the regulations of the Advisory Council (36 CFR Part 800) guide the determination of adverse effects.

ALLOCATION: The division of limited resource capabilities or supplies among the competitors for use.

ALLOTMENT: An area of land assigned to one or more livestock operators for grazing their their livestock. Allotments generally consist of BLM lands but many also include stateowned and private lands. An allotment may include one or more separate pastures. Livestock numbers and seasons of use are specified for each allotment.

ALLOTMENT MANAGEMENT PLAN (AMP): A livestock grazing management plan for a specific allotment based on multiple-use resource management objectives. The AMP considers livestock grazing in relation to other uses of the range and in relation to renewable resources — watershed, vegetation and wildlife. An AMP establishes the seasons of use, the number of livestock to be permitted on the range and the rangeland developments needed.

ALLUVIAL FAN: The alluvial deposit of a stream where it issues from a gorge upon a plain or of a tributary stream at its junction with the main stream or river (see ALLUVIUM).

ALLUVIAL TERRACE: Pertaining to geologic deposits, generally unconsolidated, that are laid down by a river or stream. Deposits are formed normally where the slope or gradient becomes less steep.

ALLUVIUM: Clay, silt, sand or gravel deposited by running water.

ANIMAL UNIT (AU): One mature (1,000 lb) cow or its equivalent (4 deer, 5 antelope, 5 bighorn sheep, 1.25 elk or 1 horse) based upon an average daily forage consumption of 26 pounds of dry matter per day.

ANIMAL-UNIT MONTH (AUM): The amount of forage necessary for the sustenance of one animal for one month, e.g., one deer for one month equals one deer AUM.

ANNUAL PLANT: A plant that completes its life cycle and dies in one year or less (Range Term Glossary Committee, 1974).

APPARENT TREND: Immediate or short-term tendency (used mainly for grazing in this EIS).

AVOIDANCE: A potential adverse effect is prevented from occurring by the partial or complete redesign or relocation of a proposed land use.

BACKGROUND: The area visible from a travel route, use area or other observer position from a minimum of 3 to 5 miles to a maximum of about 15 miles (used in visual resources management).

BAJADA: Outwash slope at the base of a mountain consisting of fragments of rock.

BIGHORN SHEEP LAMBING GROUNDS: Areas where bighorn sheep usually go to give birth — usually isolated mountainous areas.

BIGHORN SHEEP YEARLONG USE AREA: An area of land a bighorn sheep population normally ranges over in pursuit of their basic life requirements: food, cover, forage and space.

BROWSE: Tender shoots, twigs and leaves of trees and shrubs fit food for wildlife and livestock.

CARRYING CAPACITY:

(1. Ecology/wildlife management) — The number (or weight) of organisms of a given species and quality that can survive in a given ecosystem (without causing deterioration of that ecosystem) through the least favorable environmental conditions that occur within a stated interval of time.

(2. Recreation management) — The level and type(s) of recreational use that a natural or developed area can provide without deterioration of the quality of the recreation experience or the resource.

CATCHMENT: A structure built to collect and retain water.

CATEGORICAL EXCLUSION: A category of actions which do not individually or cumulatively have a significant effect on the human environment and which have been found to have no such effect and for which, therefore, neither an environmental assessment nor an environmental impact statement is required. An agency may decide in its procedures or otherwise, to prepare environmental assessments even though it is not required to do so. Any procedures under this section shall provide for extraordinary circumstances in which a normally excluded action may have a significant environmental effect.

CHANNEL: An open conduit, either naturally or artificially created, which periodically or continuously contains moving water or forms a connecting link between two bodies of water.

CHANNEL STABILITY: A relative term describing erosion or movement of the channel walls or bottom due to overflow.

CHERRY-STEMMED ROAD: A road that enters but does not pass completely through a wilderness study area.

CLIMAX: The final stage of plant succession that continues to occupy an area as long as climatic or soil conditions remain unchanged and no major disturbances occur.

CLIMAX COMMUNITY: Highest ecological development of a community on a given site determined primarily by climate but also influenced by soil, topographic, vegetative, fire and animal factors.

CLOSED DESIGNATION: Areas and trails where the use of motor vehicles is permanently or temporarily prohibited.

COMMUNITY: A group of plants and animals living together in a common area and having close interactions.

CONSERVATION FOR FUTURE USE: A cultural resource will be separated and protected from other non-compatible land uses and preserved in place because (a) that particular site type is scarce or unique, (b) its information potential cannot be realized through available archaeological methods or (c) it represents an outstanding example of a particular site type.

CONTRAST: The effect of a striking difference in the form, line, color or texture of the landscape features within the area being viewed (used in visual resources management).

CONTROLLED LANDS: Those lands in an allotment, including public land that owned or leased by the allottee.

COVER, TOTAL VEGETATIVE: Percentage of ground area covered by live aerial parts of plants and mulch.

CRITICAL RANGE: Range on which a species depends for survival; there are no alternative ranges available due to climatic conditions or other limiting factors. Also called key range or crucial range.

CRITICAL WILDLIFE HABITAT: The area of land, water and airspace required for the normal needs and survival of an endangered species.

CRUCIAL HABITAT: Crucial habitat includes portions of the habitats of officially designated BLM sensitive species that, if destroyed or adversely modified, could result in their being listed as threatened and endangered pursuant to section 4 of the Endangered Species Act of 1973, as amended, or in some category implying endangerment by a State agency or legislature (BLM Manual Section 6840, Glossary, Page 1).

CULTURAL PROPERTY: Any definite location of past human activity, habitation or use identified through a field inventory (see below), historical documentation or oral evidence. This term may include (a) archaeological or historic sites, structures and places and (b) sites or places of traditional cultural or religious importance to a specific group, whether or not represented by physical remains. Cultural properties are managed by the system of inventory evaluation and protection and use (see Appendix J).

CULTURAL RESOURCES: Those fragile and nonrenewable remains of human activity, occupation or use reflected in sites, structures, buildings, objects, artifacts, ruins, works of art, architecture and natural features that were of importance in human events. These resources consist of (1) physical remains, (2) areas where significant human events occurred — even though evidence of the event no longer remains and (3) the environment immediately surrounding the resource.

CULTURAL RESOURCE INVENTORY: A descriptive listing and documentation including photographs and maps of cultural resources; included are the processes

of locating, identifying and recording sites, structures, buildings, objects and districts through library and archival research, information from persons knowledgeable about cultural resources and varying levels of intensity of on-the-ground field surveys.

Class I: A professionally prepared study that compiles, analyzes and synthesizes all available data on cultural resources. Information sources for this study include published and unpublished documents, Bureau inventory records, institutional site files and state and national register files. Class I inventories may have prehistoric, historic and ethnological/sociological elements. These inventories are periodically updated to include new data from other studies and Class II and III inventories (see next entries).

Class II: A professionally conducted, statistically based sample survey designed to describe the probable density, diversity and distribution of cultural properties found in a large area. This is accomplished by projecting the results of intensive survey carried out over limited portions of the target area. Within individual sample units, survey aims, methods and intensities are the same as those applied in Class III inventory (see below). Class II inventory may be conducted in several phases using different sample designs to improve statistical reliability.

Class III: A professionally conducted intensive survey of an entire target area aimed at locating and recording all visible cultural properties. This survey is accomplished through systematic inspections commonly carried out by a crew of trained observers who walk a series of close-interval parallel transects until the area has been thoroughly examined.

CULTURAL RESOURCE SITE: A physical location of past human activities or events. Cultural resource sites are extremely variable in size and range from the location of a single cultural resource object to a cluster of cultural resource structures with associated objects and features. Prehistoric and historic sites which are recorded as cultural resources have sociocultural or scientific values.

CURRENT SCIENTIFIC USE: A cultural resource is the subject of an on-going scientific or historical study at the time of evaluation.

CUSTODIAL GRAZING MANAGEMENT ("C"Category): A limited form of rangeland management employed when the percentage of public lands is small, there is limited opportunity or potential for improvement or when public land is scheduled to be transferred from public ownership or when conditions are not conducive to other management. Under custodial management, an allottee is not required to follow a specified grazing system. BLM authorizes only the capacity for public lands within the alllotment.

DEFERRED-ROTATION GRAZING: Moving livestock to various parts of a range in succeeding years or seasons to provide for seed production, plant vigor and for seedling growth.

DESERT PAVEMENT: A nearlyflat desert soil surface consisting of a thin layer of pebbles covered with dark-brown varnish or iron and manganese oxides.

DESIGNATED CORRIDOR: A linear area of land with defined and recognized boundaries and capacities having ecological, technical, economic, social or similar advantages over other areas for the present or future location of rights-of-way and which have been identified and designated by legal public notice

ECOSYSTEM: A complex self-sustaining natural system which includes living and nonliving components of the environment and the circulation of matter and energy between organisms and their environment.

EFFECT (Cultural Resources): Any change in the characteristics which contribute to the use(s) determined appropriate for a cultural resource or to the qualities that qualify a cultural property for the National Register. Determination of effect is guided by criteria in the regulations of the Advisory Council, 36 CFR Part 800.

ENVIRONMENTAL ASSESSMENT (EA): The procedure for analyzing the impacts of some proposed action on a given environment and the documentation of the analysis. An EA is similar to an environmental impact statement (EIS) but is generally smaller in scope. An EA may be preliminary to an EIS.

ENVIRONMENTAL IMPACT STATEMENT (EIS): A written analysis of the impacts on the environment of a proposed project or resource management plan.

EPHEMERAL GRAZING: Seasonal livestock use of annual plants (see Annual Plants).

EROSION: The wearing away of the soil and surface by running water, wind, ice or other geological agents.

EVALUATION (Cultural Resources): The analysis of cultural resource inventory records, the application of professional judgment to identify characteristics that contribute to possible uses for recorded cultural resources, and the recommendation of appropriate use(s) for each resource or group of resources. National Register eligibility criteria, 36 CFR Part 60, are interpreted through or with reference to Bureau evaluation criteria.

EXOTIC: Not native to the place where found; pertains to plants and animals in this EIS.

EXTENSIVE RECREATION MANAGEMENT AREA: In these areas, significant recreation opportunities and problems are limited and intensive recreation management is not required. Minimal management actions related to the Bureau's stewardship responsibilities are adequate in these areas.

FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 (FLPMA): Public Law 94-579, which gives BLM the legal authority to establish public land policy, to establish guidelines for administering such policy and to provide for the management, protection, development and enhancement of the public lands.

FEDERAL LANDS: Lands owned by the United States, without reference to how the lands were acquired or which federal agency administers the lands, including mineral or coal estates underlying private surface.

FLOODPLAIN: The nearly level alluvial plain that borders a stream or river and is subject to inundation during high water periods; the relatively flat area or lowlands adjoining a body of standing or flowing water which has been or might be covered by floodwaters.

FORAGE: All browse and herbaceous food available to and usable by grazing animals. Forage value varies with palatability, nutritive content, productivity, availability, season of use, type of animal being grazed, etc.

FORBS: Herbs other than grass; pertains to grazing and wildlife habitat.

FOREGROUND-MIDDLEGROUND: The area visible from a travel route, use area or other observer position to a distance of three to five miles (used in visual resources management).

FLYWAY: An established air route of migratory birds.

GRANDFATHERED USE: A mineral, grazing or right-of-way use that was on the land on the date that the Federal Land Policy and Management Act was approved (FLPMA; October 21, 1976). Under BLM's Interim Management Policy and Guidelines for Lands Under Wilderness Review (BLM, 1979), grandfathered uses may continue on lands under wilderness review in the same manner and degree as on the date of FLPMA's approval, even if such uses impair wilderness suitability. These uses, however, must be regulated to ensure that they do not unnecessarily degrade these lands.

GRAZING PREFERENCE: The total number (active and suspended non-use) of animal-unit months of livestock grazing on public land apportioned and attached to base property owned or controlled by a permittee.

HABITAT: The place where an animal or plant normally lives, often characterized by a dominant plant and co-dominant form (pinyon juniper habitat).

HABITAT MANAGEMENT PLAN: A written and officially approved plan for a specific geographic area which identifies wildlife habitat and related objectives, establishes the sequence of actions for achieving objectives and outlines procedures for evaluating accomplishments.

HUNTER DAY: One person hunting during any part of one day.

IMPROVE GRAZING MANAGEMENT ("I" Category): A form of grazing management for rangeland in unsatisfactory condition that has production potential higher than present levels, but also has resource-use conflicts or unsatisfactory management. BLM intensively monitors the range to detect the results of "improve grazing management". Allotment plans are implemented.

INHOLDINGS: State or privately-owned land inside a wilderness study area.

INSIDE THE LEVEE: Lands between the flood control levee and the river.

INTENSIVE RECREATION OPPORTUNITIES: Concentrated or exhaustive use of recreation resources.

INTENSIVE MANAGEMENT: Managing vegetation or other resources through a system to obtain desired results.

INTERIM MANAGEMENT POLICY AND GUIDELINES FOR LANDS UNDER WILDERNESS REVIEW (IMP): A BLM document, dated December 12, 1979, which defines the policy for management of wilderness study areas so as not to impair their suitability for preservation as wilderness. The IMP will apply to these lands until Congress determines whether or not they are to be designated wilderness.

KNOWN GEOLOGIC STRUCTURES (KGS): Areas known to contain producible oil and gas deposits.

LEASABLE MINERALS: Minerals such as coal, oil shale, oil and gas, phosphate, potash, sodium, geothermal resources and all other minerals that may be acquired under the Mineral Leasing Act of 1920, as amended.

LEASE: An instrument through which interests are transferred from one party to another, subject to certain obligations and considerations.

LEGAL DESCRIPTION: The description of a particular parcel of land according to the official plat of its cadastral survey, including Township, Range and Section numbers.

LOCATABLE MINERALS: Any valuable mineral that is not salable or leasable, including gold, silver, copper, tungsten and uranium, etc. (Maley 1983).

LONG-TERM IMPACTS: Impacts occuring 5 to 20 years or more following implementation of action.

MAINTAIN GRAZING MANAGEMENT ("M" Category): A form of grazing management for rangeland already in satisfactory condition that provides for no special programs or change in existing impact. Under maintained management, BLM monitors the range to detect undesirable conditions. Allotment management plans can be implemented if desired.

MANAGEMENT FRAMEWORK PLANS (MFPs): The 1975 land use plans for public lands in the Yuma District that provide a set of goals, objectives and constraints for a specific planning area to guide the development of detailed plans for the management of each resource.

MANAGEMENT USE: A cultural resource is used for controlled experimental study which would result in its physical alteration. This study is conducted to obtain

specific information on (a) the kinds and rates of natural and human-caused deterioration or (b) the effectiveness of protection measures.

MIDDENS: A refuse area associated with villages or camps (Cultural Resources); a dunghill (Wildlife Habitat).

MINERAL ENTRY: The location of mining claims by an individual to protect his right to a valuable mineral.

MINERAL ESTATE: Mineral ownership.

MITIGATION: The lessening of a potential adverse effect by applying appropriate protection measures, the recovery of cultural resource data or other measures.

MITIGATION MEASURES: Methods or procedures committed to by BLM for the purpose of reducing or lessening the impacts of an action.

MULTIPLE-USE: The management of public lands and their various resource values so that they are used in the combination that will best meet present and future public needs.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) OF 1969: A law enacted on January 1, 1970, that established a national policy to maintain conditions under which man and nature can exist in productive harmony and fulfill the social, economic and other requirements of present and future generations of Americans. It established the Council on Environmental Quality for coordinating environmental matters at the federal level and to serve as advisor to the President on such matters. The law made all federal actions' and proposals which could have significant impact on the environment subject to review by federal, state and local environmental authorities.

NATIONAL HISTORIC PRESERVATION ACT (NHPA): The primary federal law providing for the protection and preservation of our cultural resources. Making it a national policy to preserveour cultural heritage, NHPA established the National Register of Historic Places, the Advisory Council on Historic Preservation and State Historic Preservation Officers.

NATIONAL REGISTER OF HISTORIC PLACES (NRHP): A list of districts, sites, buildings, structures and objects significant in American history, architecture, archeology and culture maintained by the Secretary of the Interior. Expanded as authorized by Section 2(b) of the Historic Sites Act of 1935 (16 U.S.C. 462) and Section 101(a)(1)(A) of the National Historic Preservation Act.

NATIONAL REGISTER QUALITY SITE: A cultural resource site determined to be eligible for nomination to the National Register of Historic Places by virtue of its local, state or national significance.

NATIVE AMERICAN VALUES: Native Americans hold specific and traditional values for sites or areas which may not contain cultural artifact or feature remains. Such sites or areas include but are not limited to places where hunting or gathering has occurred, or special areas considered sacred in their religious beliefs.

NATURAL AREA: Lands managed for (a) retention of their typical or unusual plant or animal types, associations or other biotic phenomena or (b) their outstanding scenic, geologic, soil or aquatic features or processes.

NATURALNESS: Appearing to be affected primarily by the forces of nature, with human influence largely unnoticeable.

OFF-ROAD VEHICLE (ORV): Any motorized, tracked or wheeled vehicle designed for crosscountry travel over any type of natural terrain. Exclusions (from Executive Order 11644, as amended by Executive Order 11989) are nonamphibious registered motorboats, any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes, any vehicle whose use is expressly authorized by the authorizing officer or otherwise officially approved, vehicles in official use, and any combat support vehicle in times of national defense emergencies.

OFF-ROAD VEHICLE DESIGNATIONS:

Open — Designated areas and trails where ORVs may be operated (subject to operating regulations and vehicle standards set forth in BLM Manuals 8341 and 8343).

Limited — Designated areas and trails where the use of ORVs is subject to restrictions, such as limiting the number or types of vehicles allowed, dates and times of use (seasonal restrictions); limiting use to existing roads and trails or limiting use to designated roads and trails. Combinations of restrictions are possible, such as limiting use to certain types of vehicles during certain times of the year.

Closed — Designated areas and trails where the use of ORVs is permanently or temporarily prohibited. Emergency use of vehicles is allowed.

100-YEAR FLOODPLAIN: Low lands and relatively flat areas adjacent to a water body that are subject to a 1% or greater chance of flooding in any given year, usually between the levees.

OUTSIDE THE LEVEE: Lands protected from the river by the flood control levee.

OUTSTANDING: Standing out among others of its kind; conspicuous, prominent or superior to others of its kind, distinguished or excellent as used in the description of wilderness characteristics.

OUTSTANDING NATURAL AREAS: Natural areas established to preserve scenic values and areas of natural wonder.

PERENNIAL GRAZING: Yearlong livestock use.

PERENNIAL PLANT: One with a life cycle of three or more years.

PLACER DEPOSIT: An alluvial or glacial deposit, as of sand or gravel, containing particles of gold or other valuable minerals.

PREDATION: The act of preying on other animals; food is obtained by killing and consuming animals.

PRELIMINARILY SUITABLE (WSAs): A wilderness recommendation made at any stage prior to the time when the Secretary of the Interior reports his recommendations to the President. Until the Secretary acts, the recommendation is "preliminary" because it is subject to change during administrative review.

PRIMITIVE RECREATION: Non-motorized outdoor recreation that requires undeveloped areas, e.g., those areas with wilderness opportunities.

PRIMITIVE RECREATION OPPORTUNITY: Opportunity for isolation from the sights and sounds of human beings. Opportunity to feel a part of the natural environment and to use outdoor skills.

PRIORITY USE AREA: An area where a particular resource, such as wildlife habitat, would receive management emphasis or priority. The areas are either unique, significant or best-suited for the development, management, use or protection of a resource. The principles of multiple use and sustained yield would be maintained in each priority use area. Many different uses would be allowed in these areas but the priority use would have the most emphasis. Other land uses would have limits placed on them to prevent conflicts with the priority resource. In some instances, a use totally incompatible with the priority resource would be excluded.

PRIORITY WILDLIFE SPECIES: See Species, Priority Wildlife.

PROPOSED LAND USE: Any use of lands or resources which requires an authorized officer's formal approval, whether proposed by the Bureau or by an outside applicant (used in cultural resources).

PUBLIC LAND: Vacant, unappropriated and unreserved lands that never left federal ownership; also, lands in federal ownership obtained in exchange for public lands or for timber on public lands. Land administered by the Bureau of Land Management.

PUBLIC PARTICIPATION: Part of BLM's planning system that provides the opportunity for citizens as individuals or groups to express local, regional and national perspectives and concerns in the rule making, decisionmaking, inventory and planning processes for public lands. This includes public meetings, hearings or advisory boards or panels that may review resource management proposals and offer suggestions or criticisms for the various alternatives considered.

PUBLIC USE: A cultural property is eligible for consideration as an interpretive exhibit-in-place, a subject of supervised participation in scientific or historical study, a subject of unsupervised collecting under permit or related educational and recreational uses by members of the general public.

RANGE (RANGELAND): Land dominated by vegetation that can be grazed or browsed and whose husbandry is provided routinely through grazing management instead of renovations or cultural treatment (Range Term Glossary Committee, 1974).

RANGE CONDITION: The present state of vegetation of a range site in relation to the climax plant community (natural potential) of that site. Range condition is basically an ecological rating of the plant community. Air-dry weight is the unit of measure used in comparing the composition and production of the present plant community with that of the climax community.

RANGE CONDITION TREND: Direction of change, whether stable, toward (upward) or away (downward) from the site's potential.

RANGE IMPROVEMENT: A structure, development or treatment used to rehabilitate, protect or improve the public lands to enhance the range resource.

RANGELAND MONITORING PROGRAM: A program designed to measure changes in plant composition, ground cover, animal populations and climatic conditions on the public rangeland. Vegetation studies are used to monitor changes in rangeland condition and determine the reason for any changes that are occurring. The vegetation studies consist of actual use, utilization trend, and climatic conditions.

RAPTOR: Birds of prey with sharp talons and strongly curved beaks, e.g., hawks, owls, vultures, eagles.

RECREATION AND PUBLIC PURPOSES ACT (R&PP): This act authorizes the Secretary of the Interior to lease or convey public lands for recreational and public purposes under specified conditions of states or their political subdivisions and to non-profit corporations and associations.

RECREATIONAL OPPORTUNITY: Those outdoor recreational activities which offer satisfaction in a particular physical, social and management setting in the EIS area. These activities are primarily hunting, fishing, wildlife viewing, photography, boating and camping.

RECREATION VISITOR DAY: An aggregation of 12 visitor hours. A visitor hour is the presence of one or more persons on land and water for outdoor recreation for periods totaling 60 minutes; for example, one person for one hour, two persons for one-half hour each, and so on.

RESEARCH NATURAL AREA (RNA): A natural area established and maintained for research and education, which may include (a) typical or unusual plant or animal types, associations or other biotic phenomena or (b) characteristic or outstanding geologic, soil or aquatic features or processes. The public may be excluded or restricted from such areas to protect studies.

RESOURCE AREA: The smallest administrative subdivision of a BLM district.

RESOURCE-BASED RECREATION: Recreation relating to the natural features of the land.

REST-ROTATION GRAZING: A grazing system in which one part of the range is left ungrazed for an entire year or longer, while other parts are grazed for a portion or all of a growing season.

RIPARIAN AREA: An area where the vegetation shows the effects of open water or water very close to the surface of the ground. This includes the shores of lakes and reservoirs, intermittent or perennial streams, desert washes, springs and rivers.

RIPARIAN COMMUNITIES: Vegetative communities found in association with either open water or water close to the surface. In the Desert Southwest this vegetation includes cottonwood, willow, ironwood and blue paloverde trees.

RIPARIAN HABITAT, AQUATIC (STREAMSIDE): Vegetative communities found in association with streams (both perennial and intermittent), lakes, ponds and other open water. This unique habitat is crucial to the continued existence of the fish species known to occur. Streamside vegetation maintains high-water tables, stabilizes streambanks, creates quality fishery habitat and maintains water quality. It is also essential to most terrestrial wildlife species.

RIPARIAN HABITAT, TERRESTRIAL: Vegetative communities found in association with either open water or water close to the surface includes such habitat features as willow and cottonwood trees, salt cedar and mesquite trees. This unique habitat is crucial to the continued existence of the majority of the terrestrial wildlife species known to occur in the district.

ROAD: Vehicle routes which have been improved and maintained by mechanical means to ensure relatively regular and continuous use. A way maintained solely by the passage of vehicles does not constitute a road (see Vehicle Way).

RUNOFF: The water that flows on the land surface from an area in response to rainfall or snowmelt. As used in this EIS, runoff from an area becomes streamflow when it reaches a channel.

SALABLE MINERALS: Minerals such as common varieties of sand, stone, gravel, pumicite and clay that may be acquired under the Materials Act of 1947, as amended.

SCENIC QUALITY: The degree of harmony, contrast and variety within a landscape (used in visual resources management).

SCOPING PROCESS: An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. Scoping may involve public meetings, field interviews with representatives of agencies and interest groups, discussions with resource specialists and managers, written comments in response to news releases, direct mailings and articles about the proposed action and scoping meetings.

SEMIPRIMITIVE MOTORIZED RECREATION OPPORTUNITY: Opportunity to use motorized equipment in areas with some opportunity for isolation from the sights and sounds of human beings. Isolation is not as important in semiprimitive opportunities as it is in primitive opportunities. Opportunity for a high degree of interaction with the natural environment, moderate challenge and risk, and use of outdoor skills.

SEMIPRIMITIVE NONMOTORIZED RECREATION OPPORTUNITY: Opportunity for recreation without motorized equipment in areas with some opportunity for isolation from the sights and sounds of human beings. Isolation is not as important in semiprimitive opportunities as it is in primitive opportunities. Opportunity for a high degree of interaction with the natural environment, moderate challenge and risk, and use of outdoor skills.

SENSITIVE SPECIES: See Species, Sensitive.

SHERD: A fragment of a pottery vessel.

SHORT-TERM: The period of time needed to implement management's decisions following the completion of the EIS, approximately five years.

SHORT-TERM IMPACTS: Temporary impacts lasting less than five years and expected to occur during or immediately following implementation of action.

SIGNIFICANCE: A high degree of importance as indicated by either quantitative measurements or qualitative judgments. Significant issues and impacts require explicit consideration in the preparation of a plan. Significance may be determined by evaluating characteristics pertaining to location, extent, consequence and duration of an action or impact.

SIKES ACT—(Public Law93-452): An Act passed to expand the authority for carrying out conservation and rehabilitation programs on public lands. Provides for the development of comprehensive plans for conservation and rehabilitation programs by the Secretary of the Interior in consultation with state agencies. It also provides for entering into cooperative agreements between the Secretary of the Interior and state agencies for the management of wildlife habitat on public lands.

SOCIO-CULTURAL USE: A social and/or cultural group perceives that a cultural resource, place, structure or geographic location has characteristics which help to maintain the group's heritage or identity.

SOIL HORIZON: A layer of soil, approximately parallel to the surface, that has distinct characteristics produced by soil-forming processes.

SOLITUDE: The state of being alone or remote from habitations; isolation or a lonely, unfrequented or secluded place as used in describing wilderness opportunities.

SPECIAL FEATURES: Resources that are not required for an area to be designated wilderness but that are considered in assessing the wilderness potential of an area. Such values include ecologic, geologic and other featues of scientific, educational, scenic or historic value.

SPECIAL RECREATION MANAGEMENT AREA (SRMA): Areas requiring explicit recreation management to achieve the Bureau's recreation objectives and to provide specific recreation opportunities. Special management areas are identified in the RMP, which also defines the management objectives for the area. BLM's recreation investments are concentrated in these areas.

SPECIES, ENDANGERED: An animal or plant whose prospects of survival and reproduction are in immediate jeopardy, and as further defined by the Endangered Species Act of 1973, as amended.

SPECIES COMPOSITION: Proportions of various plant species in relation to the total on a given area; may be expressed in percentages based on weight, crown cover or basal intercept.

SPECIES, PRIORITY WILDLIFE: Those fish and wildlife species listed or proposed for listing by a state wildlife agency or the U.S. Fish and Wildlife Service as endangered, threatened or sensitive candidate; and species of significant economic or recreational value.

SPECIES, SENSITIVE: A designation which is (1) applied to species not yet officially listed but which are undergoing a status review or are proposed for listing according to Federal Register notices published by the Secretary of the Interior or, the Secretary of Commerce or in accordance with comparable state documents published by state officials; (2) applied to species whose populations are consistently small and widely dispersed or whose ranges are restricted to a few localities, such that any appreciable reduction in numbers, habitat availability, or habitat condition might lead toward extinction or (3) applied to species whose numbers are declining so rapidly that official listing may become necessary as a conservation measure.

SPECIES, THREATENED: Any species which is likely to become an endandered species within the foreseeable future throughout all or a significant portion of its range, and as is further defined by the Endangered Species Act of 1973, as amended.

SPLIT ESTATE: The surface estate and the mineral estate of a parcel of land are in different ownership.

STATE HISTORIC PRESERVATION OFFICER: The official who is appointed by the Governor to be responsible for administering the State Historic Preservation Program pursuant to Section 101(b)(1) of the National Historic Preservation Act.

STOCKING RATE: Number of animals on a given area of land at any time. It may be above, below or equal to the proper carrying capacity and may be expressed as animal-unit months per acre, animal-unit years per section or acres per animal-unit month or year.

SUCCESSION, PLANT: Process of vegetational development whereby an area becomes successively occupied by different plant communities of higher ecological order.

SUSTAINED YIELD: The achievement and maintenance in perpertuity of a high level of annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

SWITCHBACK (DEFERRED) GRAZING: The discontinuance of livestock grazing on an area for a specified period of time during the growing season to promote plant reproduction or restoration of vigor by old plants.

TERRESTRIAL HABITAT: Habitat pertaining to the land as distinct from the water.

THREATENED SPECIES: Any plant or animal species that is likely to become an endangered species throughout all or a significant portion of its range, as defined by the U.S. Fish and Wildlife Service under the authority of the Endangered Species Act of 1973.

TINAJA (Spanish): A natural water catchment. Also called a tank.

TOPOGRAPHY: The exact physical features and configuration of a place or region; the detailed and accurate description of the landforms of a place or region.

TRADITIONAL LIFEWAY VALUE: The quality of being useful in or important to the maintenance of a specific social and/or cultural group's traditional system of religious belief, cultural practice or social interaction, not closely identified with specific locations. Traditional lifeway values are taken into account through planning and environmental assessment, and may be subject to inventory, evaluation, administrative protection and use.

TRAIL: A track, made by the passage of a vehicle, regularly used for travel. Desert washes are included as trails except where washes have been specifically closed to vehicle operation.

TRESPASS: The use of public lands without proper authority, resulting either from a willful or negligent act.

VEGETATION: Plants in general or the sum total of the plant life above and below ground in an area.

VEGETATIVE TYPE: A plant community dominated or apparently dominated by one or more species which give it a characteristic appearance or aspect. Examples include sagebrush, creosotebush, mesquite, shortgrass, tallgrass, etc. Usually a subdivision of a grazing region.

VEHICLE WAY: A vehicle route established and maintained solely by the passage of motor vehicles.

VIEWSHED: The area over which a specific project or feature is visible.

VISITOR DAY: See Recreation Visitor Day.

VISUAL RESOURCE: The land, water, vegetation and animals that comprise the scenery of an area.

VISUAL RESOURCE MANAGEMENT (VRM): The planning, designating and implementing of management objectives to provide acceptable levels of visual impacts for all BLM resource management activities.

VISUAL RESOURCE MANAGEMENT CLASSES: The degree of acceptable visual change within a characteristic landscape. A class is based upon the physical and sociological characteristics of any given homogeneous area and serves as a management objective.

Class I areas (preservation) provide for natural ecological changes only. This class includes primitive areas, some natural areas, some wild and scenic rivers and other similar sites where landscape modification activities should be restricted.

Class II (retention of the landscape character) includes areas where changes in any of the basic elements (form, line, color or texture) caused by management activity should not be evident in the characteristic landscape.

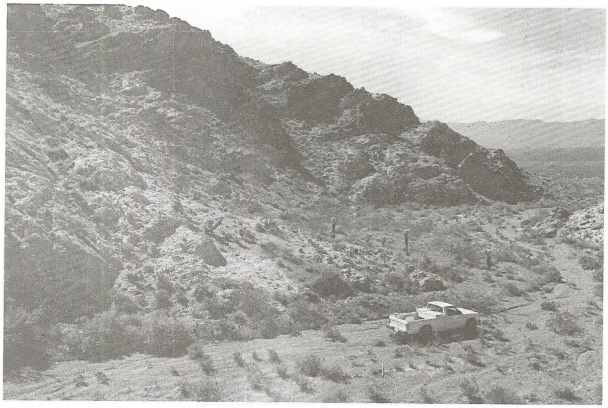
Class III (partial retention of the landscape character) includes areas where changes in the basic elements (form, line, color or texture) caused by management activity may be evident in the characteristic landscape. However, the changes should remain subordinate to the visual strength of the existing character.

Class IV (modification of the landscape character) includes areas where changes may subordinate the original composition and character; however, they should reflect what could be a natural occurrence within the characteristic landscape.

Class V (retention or enhancement of the landscape character) includes areas where change is needed. This class applies to areas where the landscape character has been so disturbed that rehabilitation is needed or where the quality class has been reduced because of unacceptable intrusions. It should be considered an interim short-term classification until one of the other classes can be reached through rehabilitation or enhancement.

VULNERABILITY: The condition where a resource or area is in danger of extensive degradation in the immediate or foreseeable future.

WATER QUALITY: Thechemical, physical and biological characteristics of water with respect to its suitability for a particular use.



Off-highway vehicle use opportunities are available in desert washes and on jeep trails — Black Mountains North WSA.

WATERSHED: A total area of land above a given point on a waterway that contributes runoff water to the flow at that point.

WETLANDS: Permanently wet or intermittently flooded areas where the water table (fresh, saline or brackish) is at, near or above the soil surface for extended intervals, where hydric wet soil conditions are normally exhibited and where water depths generally do not exceed two meters.

WILDERNESS AREA: An area formally designated by Congress as a part of the National Wilderness Preservation System.

WILDERNESS CHARACTERISTICS: Identified by Congress in the 1964 Wilderness Act: size, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation and supplemental values such as geological, archaeological, historical, ecological, scenic or other features. It is required that the area possess at least 5,000 acres of contiguous public land or be of a size to make practical its preservation and use in an unimpaired condition; be substantially natural or generally appear to have been affected primarily by the forces of nature, with the impairing of man being substantially unnoticeable; and have either outstanding opportunities for solitude or a primitive and unconfined type of recreation. Congress stated that a wilderness area may also have supplemental values, which include ecological, geological or other features of scientific, educational, scenic or historical value.

WILDERNESS STUDY AREA (WSA): A parcel of public land that has been found to possess the basic wilderness characteristics identified by Congress in the Wilderness Act of 1964; namely, naturalness, outstanding opportunities for solitude or a primitive and unconfined type of recreation, size of at least 5,000 acres, and the appearance of having been affected primarily by the forces of nature. Supplemental values such as geological, archaeological, historical, ecological, or scenic features also may be present.

WILDERNESS VALUES: The wilderness characteristics and multiple resource benefits of an area.

WINDOW: Usually short, narrow passageways through constrained areas which are the most feasible potential locations for linear facilities such as powerlines and pipelines considering engineering and/or environmental factors.

WITHDRAWAL: An action that restricts the use of public lands and segregates the lands from the operation of all or some of the public land or mineral laws.

YEARLONG GRAZING: Continuous grazing for a 12-month period or for a calendar year.

Yucca harvest area in Warm Springs WSA.

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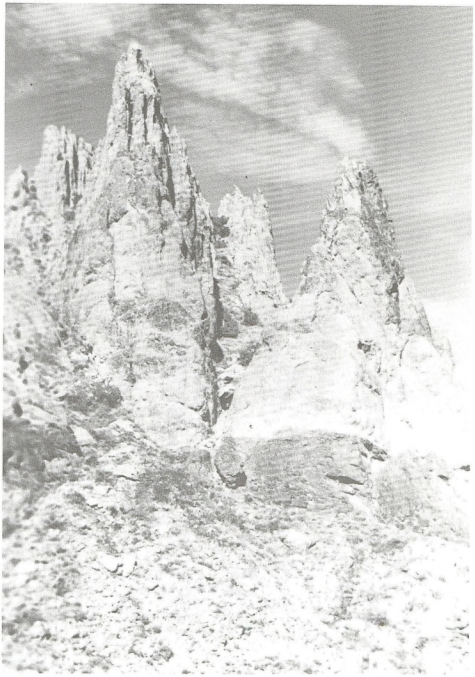

Rock formations found in the estern Black Mountains — Mount Nutt WSA.

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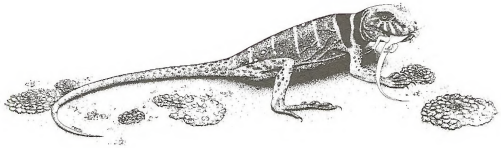

Desert tortoise habitat is found in the Ragged Top and Sierra Estrella WSAs.

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